

USER MANUAL

4, 9 & 16 CHANNEL

NETWORK VIDEO RECORDER

INSTRUCTION MANUAL

To obtain the best performance and ensure device function correctly, please read this instruction manual carefully and completely.

FCC Compliance

USER-INSTALLER CAUTION: YOUR AUTHORITY TO OPERATE THIS FCC VERIFIED EQUIPMENT COULD BE VOIDED IF YOU MAKE CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE TO PART 15 OF THE FCC RULES.

NOTE: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

THIS CLASS A DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

WARNINGS, CAUTIONS & COPYRIGHT

WARNINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MISTURE.

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

Explanation of Graphical Symbols

	The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of insinuated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral rhombus is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product.

USERS OF THE SYSTEM ARE RESPONSIBLE FOR CHECKING AND COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND STATUTES COIPCERNING THE MONITORING AND RECORDING OF VIDEO AND AUDIO SIGNALS. ULTRAK SHALL NOT BE HELD RESPONSIBLE FOR THE USE OF THIS SYSTEM IN VIOLATION OF CURRENT LAWS AND STATUTES.

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1 INTRODUCTION

1.1 FEATURE

- Support 16-channel IP cameras input.
- Support H.264 / MPEG4 / MJPEG decoding.
- Real-time Display & Playback.
- Support 5 Megapixel IP Camera for each channel.
- Support HDDs x4
- Support e-SATA interface
- Support HDMI Video interface .
- Support CMS (Central Management System) control
- Audio Backup for all channels
- Graphic User Interface (GUI).
- Support time-point backup function under Ethernet remote control mode. User can select any time period to process backup from remote side.
- Support time-search & event-search function under Ethernet remote control mode.
- Up to four online clients for independent remote control; individual live-time, play-back & time-search function available
- Support PPPoE/ Static/ DHCP IP & DDNS.
- Powerful mobile surveillance function, support i-Phone & Android

1.2 SPECIFICATION

MODEL		HNR-16EE
System		
OS		Embedded Linux
connector	Ethernet	RJ-45, 10/100/1000 Mbps x1
	VGA output	D-SUB output
	HDMI output	HDMI output
	USB 2.0	Front : 2 ports
Power		DC 12V, 5A
Video and Audio		
Video input		16 channels
Audio input		16 channels
NVR Functions		
Camera Name		Max. 20 characters
Screen Split Control		1, 4, 9, 16

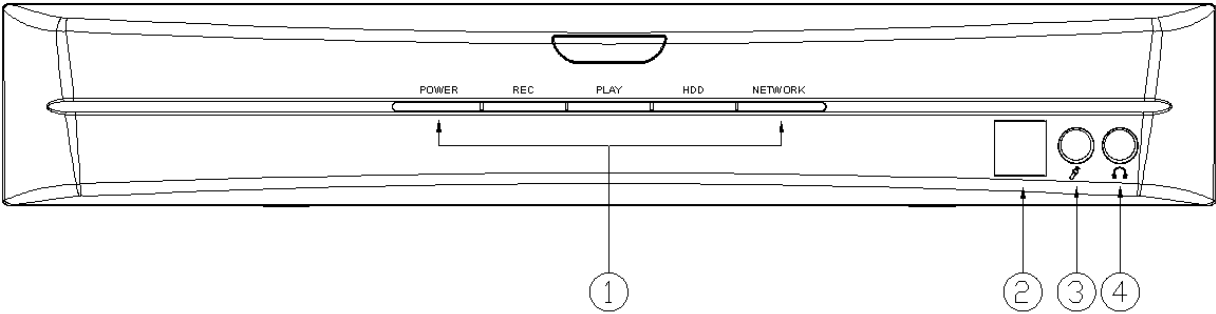
Image Control	Contrast / Brightness / Saturation / Hue
Recording mode	Manual / Schedule / Alarm
Pre Recording	1~5 sec
Watermark	Support
Searching and Playback	
Search Method	Date / Time / Event
Date/ Time / Event Search	Selectable on the calendar
Log Search	Through the log data to find the video event / time
Backup Type	USB
Remote Client Software	
Monitoring Environment	Hunt CMS, Iprosecu M.V2 for I phone / I pad , Iprosecu A.M.V2 for Android phone / Android pad, Web site
IP cam Live View	16 Channels
Remote Search	Web site remote time / event search
System Monitoring and Recovery	
Monitoring	Watchdog
Alarm	
Alarm Input	8 inputs
Alarm output	2 outputs
Peripheral Devices	
Audio in	3.5 Ø Earphone stereo jack
Audio out	3.5 Ø Earphone stereo jack
RS 485	2- pin terminal
Storage & Backup Devices	
INTERNAL HDD SUPPORT	SATA HDD x 4
EXTERNAL USB BACKUP DEVICE (PAN DRIVE, HDD, BURNER)	USB x2
E-SATA	x1
RAID	N/A
Networking	
Type	Static/ DHCP/ PPPoE/DDNS
Environment	
Operating Temp.	0 - 45 °C / 32~113 F
Humidity	0~80% RH (non-condensing)
Language	

Type	English / Traditional Chinese / Simple Chinese / Russian / Italian / Japanese / Czech / France / Germany / Spanish / Portuguese
Physical	
Color	Black
Dimensions (W x H x D)	360 x 60 x 311 mm
Weight	4 KG

*** SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE**

2 **HARDWARE OVERVIEW**

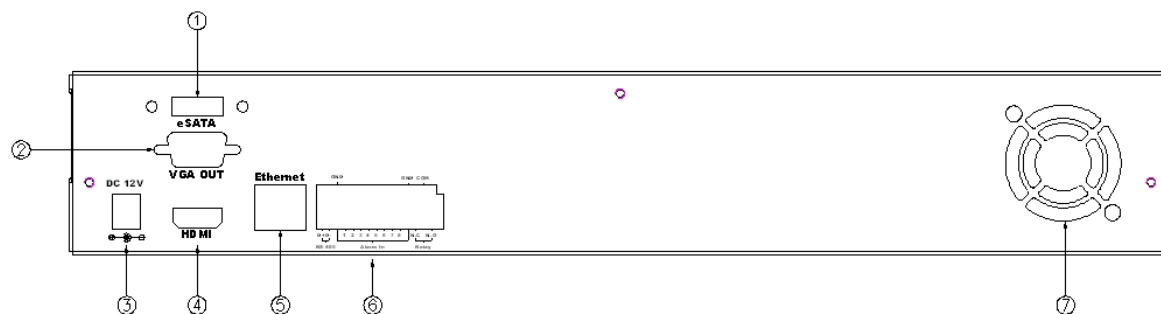
2.1 **FRONT PANEL**



NVR OPERATION

NO.	LABEL	OPERATION
1	LED	Led Indicator
2	 / 	USB Connector/ USB Mouse Connector
3	MIC IN	Microphone input(Phone Jack)
4	AUDIO OUT	Earphone output(Phone Jack)

2.2 BACK PANEL



NO.	LABEL	OPERATION
1	E-SATA	E-SATA interface
2	VIDEO OUT (VGA)	Connect to LCD monitor
3	POWER	Connect to power adapter (AC 12V/5A)
4	VIDEO OUT (HDMI)	HDMI video output
5	ETHERNET	RJ-45 connector
6	ALARM IN/ RELAY OUT/ RS-485	8 alarm in/ 1 relay out/ RS485
7	FAN	The fan louvers

2.3 ALARM TRIGGER

There are four types of alarms: Motion detection, Video Loss Alarm, External Alarm, and Digital Input from Camera. Following are the possible action when alarm is triggered. Every action is configurable (Ex. the screen display pattern, the relay triggered time.etc) and will be explained in the later chapter.

A. When Motion detection happens:

- a. The live screen pattern can be switch to single channel screen or split screen.
- b. External relay/ built-in buzzer can be triggered.
- c. Alarm timepoint can be recorded in the event list, and you can search for the event in playback.
- d. On the channel which the alarm triggered, the icon  pops up to remind the user.
- e. The pre/ post-alarm recording video can be sent to e-mail/ uploaded to FTP.
- f. CGI can be sent to an http server.

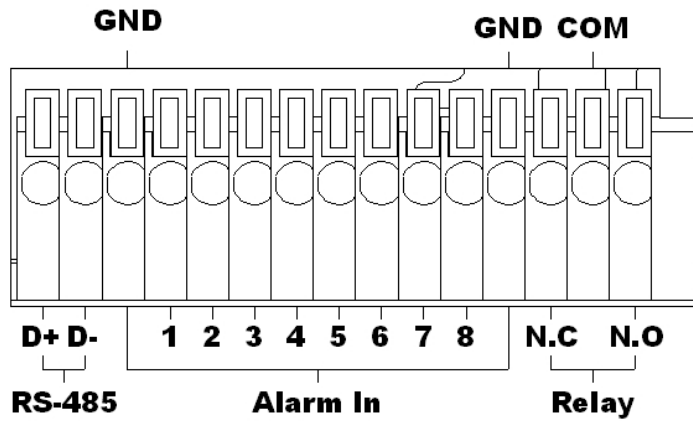
B. When External Alarm or Digital Input from Camera happen:

- a. External relay/ built-in buzzer can be triggered.
- b. Alarm timepoint can be recorded in the event list, and you can search for the event in playback.
- c. On the channel which the alarm triggered, the icon  pops up to remind the user.
- d. The pre/ post-alarm recording video can be sent to e-mail/ uploaded to FTP.
- e. CGI can be sent to an http server.

C. When Video Loss Alarm happens:

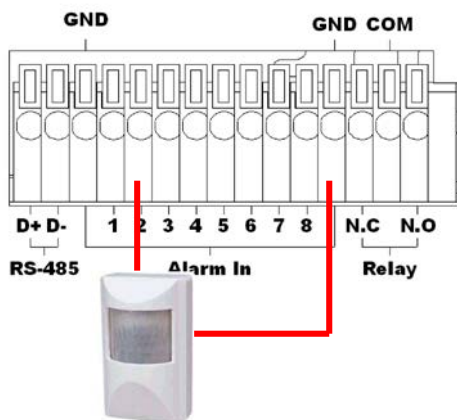
- a. External relay/ built-in buzzer can be triggered.
- b. Alarm timepoint can be recorded in the event list, and you can search for the event in playback.
- c. On the channel which the alarm triggered, the icon  pops up to remind the user.
- d. CGI can be sent to an http server.

D. Alarm in connector

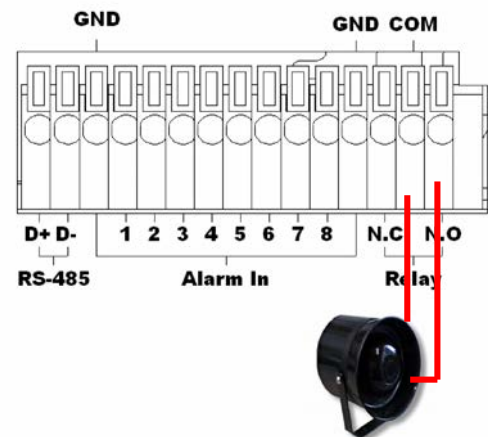


D+	RS-485: sends +/ receives +
D -	RS-485: sends -/ receives -
GND	Ground
ALARM IN 1-8	Alarm input
N.C	Relay: Normally close
N.O	Relay: Normally open
COM	Relay: Common

EX1 : Connect GND & Alarm to external IR detector.



EX2 : Connect N.O & COM to external siren.



Depending on the external device type,
You may connect N.C & COM to external device.

2.4 IR REMOTE CONTROL



ITEM	
REC	Start recording on live view.
ID1~8	ID (corresponding with NVR ID)**
MENU	Call out/ close main menu.
ZOOM	2X Zoom in/ back to original size on single channel view.
PTZ	Call out/ close PTZ panel.
AUTO	Start/ end auto swap.
IPCAM	Call out/ close quick setup menu.
	In any menu, use ▲▶▼◀ to switch the selected item or adjust value, and use “enter” to enter.
▶	Call out/ close playback menu on live view.
■	Stop playback and call out playback panel under playback mode.
▶▶/◀◀	Fast forward/ Fast backward under playback mode.
▶ / ◀	Play/Playback frame by frame under playback mode.
COPY	Start recording the playback video to USB under playback mode.
Vol +/-	Adjust the audio volume.
CH +/-	Jump to next channel/ previous channel.
0~9	Press the number to jump to corresponding channel. (Ex. Press 1 and 6 to jump to CH.16)
DISPLAY	Display/ hide the channel number and IP address on live view.
↶ RETURN	Jump to the channel users view before the current channel.

****Each NVR can setup its own ID number. The user can control NVR via remote controller by pressing ID button to change to the same ID mode with NVR.**

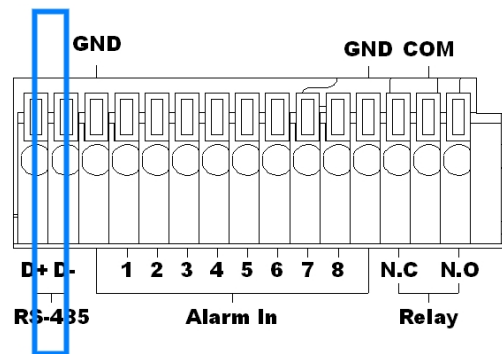
For example, if NVR ID is set as 1, users are only allowed to execute operations via remote controller after he press “ID1” button. Remote controller stays on current mode until users change it, so It’s no need to press the ID button every time users do operations. If the user press different ID number button from NVR, the remote controller cannot control NVR.



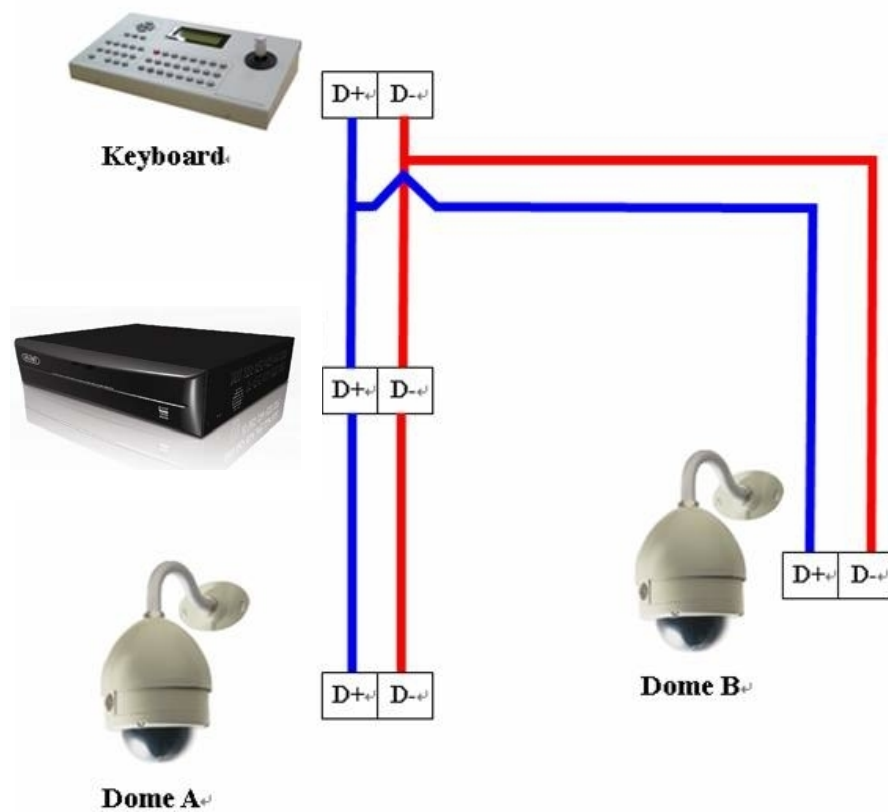
If you own several NVRs of the same model, use ID to make a distinction.

2.5 PTZ (PAN, TILT AND ZOOM) CAMERA

Following diagram for NVR connect between PTZ camera & joystick controller, for NVR to control PTZ camera please make sure the CAMERA ID, BANDRATE (default at 9600 bps) and RS-485 cable.



Under “Two Core” connection, controller can control speed dome without integrated protocol into NVR. Moreover, one keyboard can connect MAX 256 units of speed dome.



3 SYSTEM SETUP

3.1 MENU SETUP INTERFACE(GUI)



A.  CAMERA SETUP



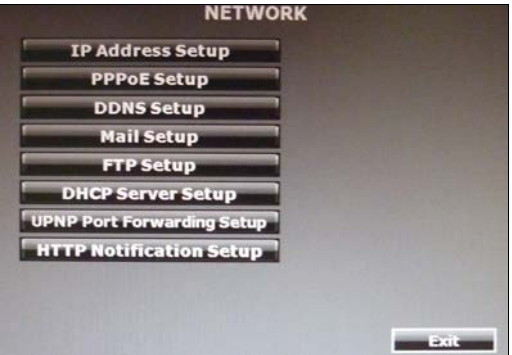
C.  ALARM SETUP



B.  RECORD SETUP



D.  NETWORK SETUP





E. AUTHORITY SETUP

AUTHORITY

☒ HDD Format (Require Password Confirmation)
☐ Anonymous User Login
☐ Password Protection
☐ Keyboard Lock
☐ Auto log out after the menu is closed

User Management

Save Cancel



F. DISK MANAGEMENT

DISK

Overwrite Mode: OFF
Hard Disk Full Warning: 20%
Auto Deletion: ON
Reserve Day: 1

Storage Information
Format HDD

Save Cancel



G. SYSTEM SETUP

SYSTEM

NVR Name: HNR
NVR ID: 0
Language: English
Date Format: YYYY-MM-DD
Version: K1104-V1.0.04

Software Update
Time Setup
Status Display Setup
Configure Setup
Daylight Saving Time
Monitor Adjust

Save Cancel



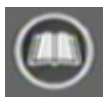
H. EXIT

3.2 LIVE VIEWING AND POP-UP MENU



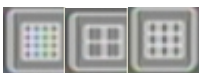
NOTE : *The pop-up menu can be activated by moving the mouse cursor to the bottom of the live viewing screen.

*The captured images among this user manual are based on 16CH NVR model, in 04CH and 09CH NVR models, please follow the real situation.



A. GUI MENU BAR

With live viewing mode, press this button to get into the GUI menu.



B. DISPLAY CONTROL

Within live-viewing or playback mode, use display control to switch the camera channel.



C. AUTO SWAP

Press it to start auto swap. The interval depends on the setting in IPCam Image Setup when it's on single channel view. For split screen the switch dwell interval is 5 sec.

D. **PTZ CONTROLLER**

Within live-viewing mode, Clicks this button to get into the PTZ setup menu. User can right-click the button of the mouse to exit PTZ Setup.

NOTE : Only for the camera supported PTZ function.

PTZ CONTROL

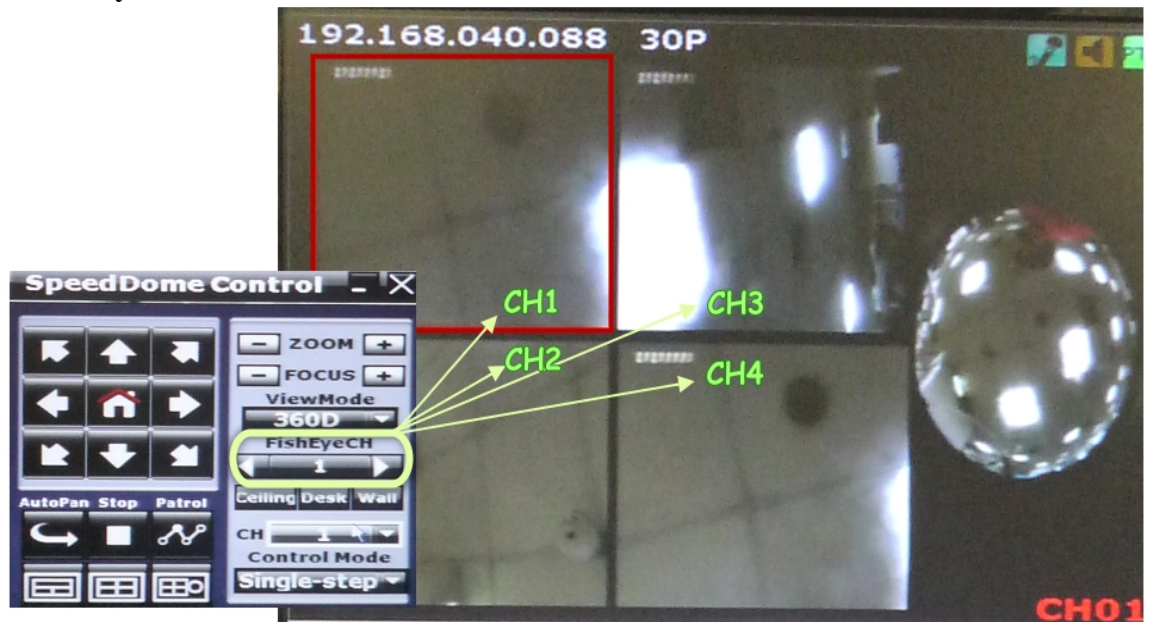


Press the minimization icon then the control panel becomes smaller:



Move the mouse and the arrow will follow the mouse and change direction. In this mode user can click on the live view to control direction instead of the direction key on control panel.

If a fisheye camera is connected:



E-PTZ Steps:

- (1) Select the channel number you want to setup, if there are several ones.
- (2) Select the View Mode, 360 degree or 180 degree.
- (3) Select the camera location, ceiling, desk, or wall.
- (4) Select split screen pattern



: 360 degree panorama view + sub screens x4



: 180 degree flat view + sub screens x2



: sub screens x4

- (5) After you decide the screen pattern, use the fisheye channel list to select one of the sub screens. (as the green circle on the picture above). The selected one will be indicated in a red frame.
- (6) For the selected sub screen, use the 4-direction arrows and the “+” (zoom in) ”-” (zoom out) icon for E-PTZ control.
- (7) Control Mode: Select the E-PTZ moving mode, step by step or continuous.
- (8) The AutoPan, Stop, and Patrol buttons are invalid here if the fisheye camera doesn’t support those function.



E. DISK INFORMATION

With live viewing mode, press this button to display disk information.



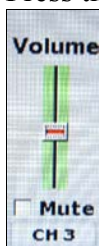
F. DIGITAL ZOOM

In the live full screen mode, left-click the button of the mouse to pull a range to zoom in or zoom out the image. User can right-click the button of the mouse to disable this function. (NOTE: Using the mouse to operate digital zoom can zoom in to max. 16 times.) Moreover, user can also use ZOOM key on the front panel to perform this function. (First, click ZOOM Key and then click ▲▼◀▶ key to select zoom in or zoom out position. Finally, click ENTER key to complete the setting. Moreover, click ZOOM Key again can disable digital zoom function. Using the panel key to perform zoom in function is fixed at 2 times.)



G. AUDIO VOLUME

Press this button, and the audio volume control board will pop up.



H. BOARDCASTING

Press the bottom to enable or disable the one way audio. You can use microphone to speak simultaneously to all the channels.



I. FULL SCREEN

Press the bottom for full-screen mode.



J. RECORD AND PLAYBACK CONTROL

Same as front panel controller and remote controller.

K. SOUND INPUT/ SOUND OUTPUT / PTZ CONTROL

There are little icon on the right top of the live vide of every channel. Click  to enable the two ways audio. Click  to enable the sound output. Click  to PTZ call out the control board. Note that if those functions are not support by the camera linked, you will not see the corresponding icons.

The sound options do not affect the audio recorded into playback video. As long as the audio setup is enabled, the playback video includes audio even the sound output here is turned off.

L. RECORDING STATUS

Beneath the date and time, it displays the current recording type:

Record mode: Schedule – NO REC period	2012/10/15 MON 13:46:22 X 1%
Record mode: Schedule – ALARM REC period Record mode: Alarm trigger	2012/10/15 MON 13:46:47 A 1%
Record mode: Manual – Stop Recording	2012/10/15 MON 13:52:35 1%
Record mode: Schedule – FULL REC period Record mode: Manual – Recording	2012/10/15 MON 13:47:14 REC 1%

3.3



CAMERA SETUP



A. IPCam Setup



A-1. IPCam Quick Search



Press the “IPCam Quick Search” button and click “Search Device” button in the following, NVR will search the IPCAM devices which IP address are setup as the same domain as NVR IP address. Moreover, click the IPCam device which from the list can import the device information to the channel automatically without any manual key-in step.

The IPCam has to be under the same LAN with NVR in order to connect successfully. Ex. If NVR IP address is 192.168.10.33, IP Cam IP address should be 192.168.10.X. You can edit IP Cam IP address here or on the IP Cam.

a. Normal Mode

The screenshot shows the 'IPCam Setup' window with a tabbed interface at the top (1-16). The 'Mode' dropdown is set to 'Normal Mode'. The 'IPCam Quick Search' button is visible. The 'Enable' checkbox is checked. The 'IP Address' field contains '192.168.22.46', 'Port' is '111', 'User' is 'admin', and 'Password' is '*****'. The 'State' field is empty. At the bottom right is a 'Connect IPCAM' button, and at the bottom are 'Save' and 'Cancel' buttons.

Enable this channel. Key in the IP address, port, username, and password of the device you prepare to connect. You can find the information on the IP Cam.

Click the “connect IPCAM” button, the message will show in “State” column to tell you whether connection succeeds or not.

Note: To the camera connected via ONVIF protocol, the PTZ control function is not supported. Note: To the camera connected via ONVIF protocol, the PTZ control function is not supported.

b. RSTP Mode

Under RTSP Mode, the NVR only support the IP address indication, the live video, and video recording. Other functions like motion detection are not supported.

The screenshot shows the 'IPCam Setup' window with the 'Mode' dropdown set to 'RTSP Mode'. The 'IPCam Quick Search' button is visible. The 'Enable' checkbox is checked. The 'IP Address' field contains '192.168.22.46', 'Port' is '111', 'User' is 'admin', and 'Password' is '*****'. Below these are two empty fields for 'RTSP Path1' and 'RTSP Path2'. At the bottom right is a 'Connect IPCAM' button, and at the bottom are 'Save' and 'Cancel' buttons.

Key in the IP address, port, username, and password of the device you prepare to connect. You can find the information on the IP Cam.

To link to the IP camera, check the RTSP Path settings of your IP camera, and key in the corresponding values of two streams in “RTSP Path 1” and “RTSP Path 2”.

NVR Setting

Camera Setup

Camera Quick Search Mode: RTSP Mode

☐ Enable

IP Address: 192.168.22.52

Port: 554

User: admin

Password: *****

RTSP Path: **v2**

RTSP Path: v2

Connect Camera

Save Cancel

IPCAM Setting

Streaming 1 Setting

☒ Basic Mode ☐ Advanced Mode

Resolution: 1280x800

Quality: Best

Video Frame Rate: 30 FPS

Video Format: H.264

RTSP Path: **v2**

Streaming 2 Setting

☒ Basic Mode ☐ Advanced Mode ☐ Close

Resolution: 640x480

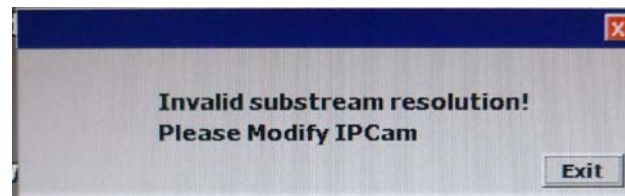
Quality: Standard

Video Frame Rate: 30 FPS

Video Format: JPEG

RTSP Path: v2

Note: When you select RTSP mode, make sure the substream resolution of camera is VGA(640x480). Or you will receive the warning message when you try to connect with the camera:



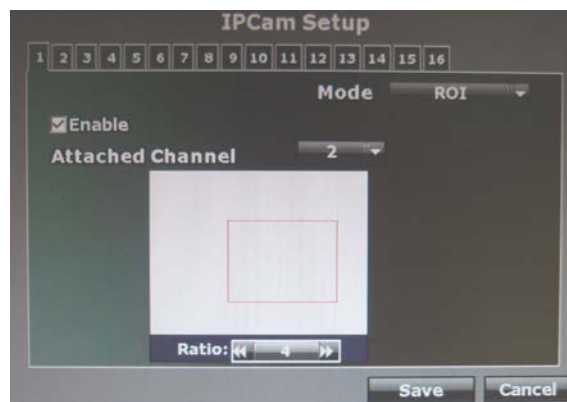
Here we lists some RTSP setting for sample:

RTSP Path 1 (IPCam Main stream)	RTSP Path 2 (IPCam Sub stream)	Result
1920 x 1080	640 x 480	OK. NVR takes 1920x1080 streaming for single channel view, and 640x480 streaming for split screen.
1920 x 1080	N/A (Fill in nothing on "RTSP Path 2")	Error Message: "Invalid Substream Resolution! Please modify IPCam." NVR takes 1920x1080 streaming for both single channel view and split screen. However, it can only allow 640x480 resolution for split screen, so it shows error in return.
640 x 480	N/A (Fill in nothing on "RTSP Path 2")	OK. NVR takes 640x480 streaming for both single channel view and split screen.
N/A (Fill in nothing on "RTSP Path 1")	640 x 480	OK. NVR takes 640x480 streaming for both single channel view and split screen.
640 X480	1920 x 1080	OK. NVR takes 1920x1080 streaming for single channel view, and 640x480 streaming for split screen.

1920 x 1080	1920 x 1080	Error Message: "Invalid Substream Resolution! Please modify IPCam." NVR takes 1920x1080 streaming for both single channel view and split screen. However, it can only allow 640x480 resolution for split screen, so it shows error in return.
-------------	-------------	--

c. ROI

This function allows users to set up the channel as an attached channel. An attached channel is based on a normal/ RTSP channel has been set up, and can display the same live view as the normal/ RTSP channel. The attached channel is not physically linked to any camera, so it doesn't increase the bandwidth loading. Users cannot do camera setup (like motion detection or image adjustment) on attached channel.



1. Enable: Choose "ROI".
2. Attached Channel: Select a connected normal/ RTSP channel in the drop-down menu.
3. Ratio: Use the arrows to adjust the zoom ratio, and press the red frame to drag it to the area that you want it to show on the live view screen.

A-2. Connect IPCAM : After insert the IPCAM related information, click this button to test the connection circumstances.

B. IPCam Video Setup



B-1. Resolution

Click drop down list to change the resolution of connecting device.

B-2. Quality

Click drop down list to change the image quality.

For H.264 IPCam above 1 Megapixel, the resolution options support “4Mbps, 3Mbps, 2Mbps, 1.5Mbps, 1Mbps”.

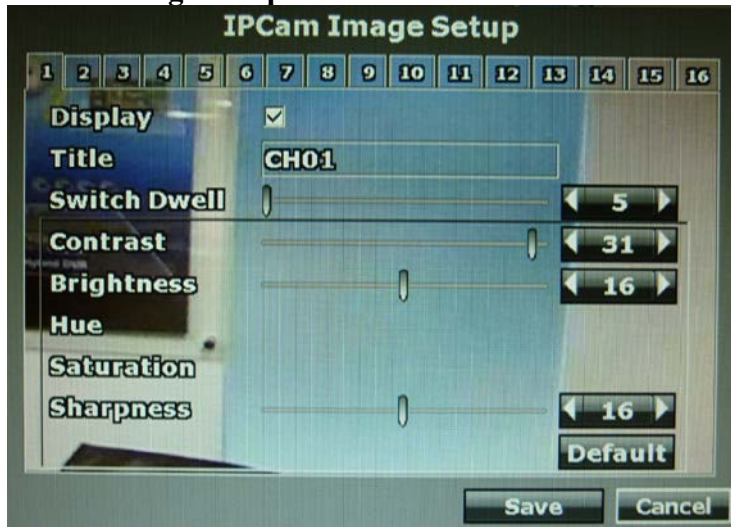
For H.264 IPCam less than 1 Megapixel, the resolution options support” 2Mbps, 1.5Mbps, 1Mbps, 512Kbps, 256Kbps”

For MPEG IPCam, the resolution options support “Standard, Medium, Low”.
(The highest resolution option is “standard” due to the chip performance limits of IPCam)

B-3. FrameRate

Click drop down list to change the frame rate of connecting device.

C. IPCam Image Setup



C-1. Display

Use the mouse to enable or disable the camera display on the screen or not.

C-2. Title

Use the mouse to setup the title of connecting IP device.

C-3. Contrast

Press ◀ or ▶ to change contrast level. The adjustment value is between 0~255

C-4. Brightness

Press ◀ or ▶ to change brightness level. The adjustment value is between 0~255

C-5. Hue

Press ◀ or ▶ to change hue level. The adjustment value is between 0~255

C-6. Saturation

Press ◀ or ▶ to change saturation level. The adjustment value is between 0~255

C-7. Sharpness

Press ◀ or ▶ / mouse wheel to change sharpness level. The adjustment value is between 0~15

C-8. Switch Dwell

Press ◀ or ▶ to change auto switch second. The value is between 0~99 sec.

D. Motion Setup



D-1. Relay Dwell

Press ◀ or ▶ to change the relay time or disable relay function.

D-2. Buzzer Dwell

Press ◀ or ▶ to change the buzzer time or disable buzzer function.

D-3. Area1 Sensitivity

Press ◀ or ▶ to change the sensitivity of setup motion area in Area1. Click “Motion Area Setup” and drag a blue area for motion detection.

D-4. Area2 Sensitivity

Press ◀ or ▶ to change the sensitivity of setup motion area in Area2. Click “Motion Area Setup” and drag a green area for motion detection.

D-5. Area3 Sensitivity

Press ◀ or ▶ to change the sensitivity of setup motion area in Area3. Click “Motion Area Setup” and drag a red area for motion detection.



After dragging an area, right-click the mouse, select “Exit with saving” to complete the area setup.

Select “Enable All” to set up global motion detection.

Select “Clean All” to clean the area of the current color in the view.

Select “Exit Without Saving” to go back to motion setup menu and the setting you just changed will not be saved.

E. Mask Setup



The masked area will not show on the live video and video playback.

E-1. Area1

Tick the “Area1” box and click “Area Setup” to drag a blue area for masking.

E-2. Area2

Tick the “Area1” box and click “Area Setup” to drag a green area for masking.

E-3. Area3

Tick the “Area1” box and click “Area Setup” to drag a red area for masking.



After dragging an area, right-click the mouse, select “Exit with saving” to complete the area setup.

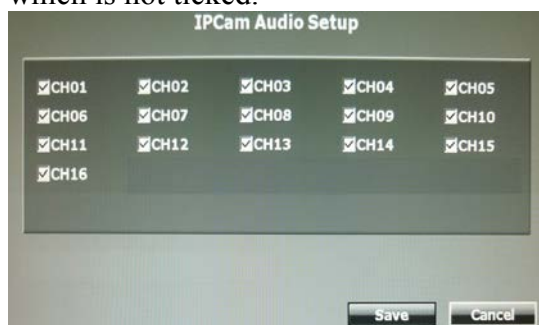
Select “Enable All” to set up global masking.

Select “Clean All” to clean the area of the current color in the view.

Select “Exit Without Saving” to go back to mask setup menu and the setting you just changed will not be saved.

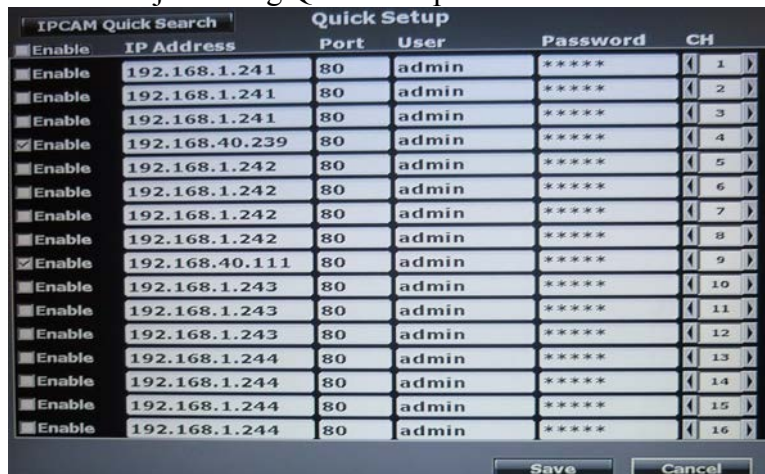
F. IPCam Audio Setup

The channel ticked means the sound from camera will be recorded into the playback video. Vice versa. No sound will be recorded in the playback video of the channel which is not ticked.



G. Quick Setup

Other than “IPCAM Setup”, you can choose another way to complete the IP camera connection job: using Quick Setup.



G-1 Key in information manually

Here is the all-channel list. You can key in the IP address, port, and user name & password of the IP camera, and then assign the channel number. Tick “Enable” to connect with the IP camera.

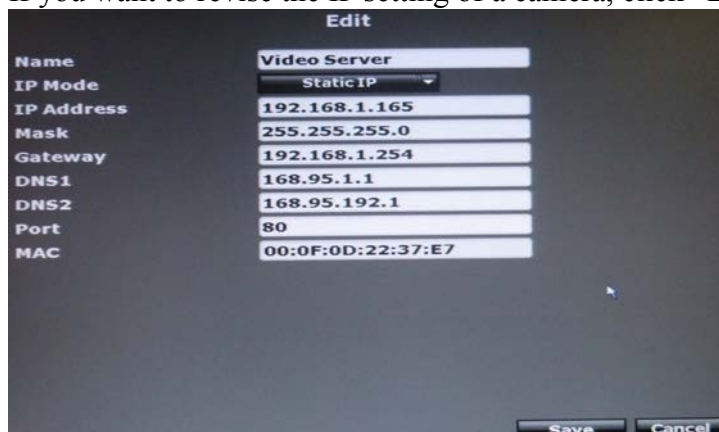
G-2 IPCAM Quick Search

With Quick Search, you need not type the IP address. Click “IPCAM Quick Search” to enter the search menu.



The machine searches for all the IP devices under the LAN and list here. Find the IP camera you want to connect with, assign a channel number for it, and tick “Enable” so that this IP camera will be added to the all-channel list. Back to the all-channel list, you can key in the user name and password, and tuck “Enable” to connect with the camera.

If you want to revise the IP setting of a camera, click “Edit”:



The IPCam has to be under the same LAN with NVR in order to connect successfully. Ex. If NVR IP address is 192.168.10.33, IP Cam IP address should be 192.168.10.X. You can edit IP Cam IP address here or on the IP Cam.

3.4



RECORD SETUP



A. Pre-Alarm Record Time / Post-Alarm Record Time

Pre-alarm record means the recording before alarm is triggered; post-alarm record means the recording after alarm is triggered. If you set 5 sec for pre-alarm and 5 sec for post-alarm, the alarm recording length will be total 10 sec.

B. Record Mode

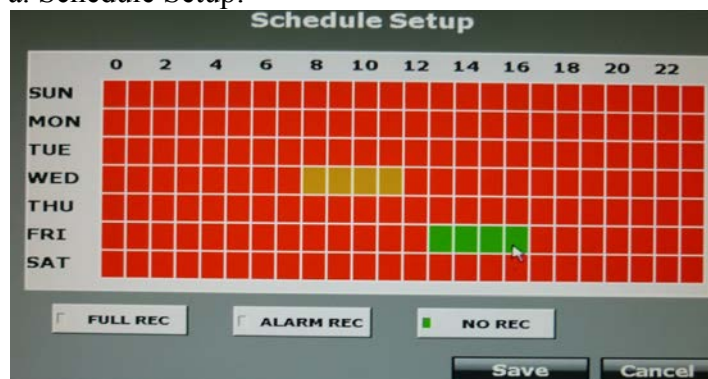
The record mode will be applied to all channels simultaneously. When recording, NVR record both main streaming and sub streaming from IPCam.

Use the drop down list to switch the recording mode.

1. Manual: Click  to start recording. Click  to stop recording.

2. Schedule:

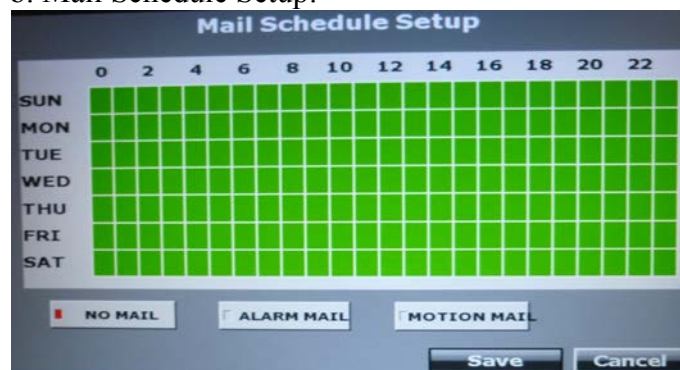
a. Schedule Setup:



Click the tag “Full Recording”(Red) / “Alarm Recording”(Yellow) / “No Recording”(Green), and then draw on the calendar. The recording type will follow the schedule.

The tag “Alarm Recording” includes all alarm type.

b. Mail Schedule Setup:



Select the time that the recording video is sent to the mail address. No mail will be sent during “NO MAIL” time period even the motion detection is triggered.

The tag “ALATM MAIL” refers to both external alarm and DI from camera.

c. FTP Schedule Setup:

	0	2	4	6	8	10	12	14	16	18	20	22
SUN	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP
MON	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP
TUE	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP
WED	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP
THU	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP
FRI	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP	ALARM FTP
SAT	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP	NO FTP

☐ NO FTP ☐ ALARM FTP ☒ MOTION FTP

Save Cancel

Select the time that the recording video is upload to FTP. No file will be uploaded during “NO MAIL” time period even the motion detection is triggered.

The tag “ALATM FTP” refers to both external alarm and DI from camera.

- 3. Alarm Trigger:** Start recording when any type of alarm event happen. The recording video length is according to the setting of “Pre-Alarm Record Time” or “Post-Alarm Record Time”.

C. Mobile Streaming Setup

Press on to record the streaming for mobile viewing

Mobile Record

OFF
ON

Save Cancel

3.5



ALARM SETUP



A. Alarm Trigger Setup



A-1. Alarm Auto Switch

Use the drop down list to switch the alarm auto switch. When the alarm is triggered, the screen will switch to full screen, split screen (16CH split screen) or disable.

A-2. Video Loss Detection

Use the drop down list to switch the video loss detection. When the video loss is detected, the alarm will be triggered.

A-3. Digital Input (IPCam)

Use the drop down list to switch on /off the Digital Input from IP camera. When the DI signal is received from camera, the alarm will be triggered.

A-4. Ext. Alarm Detection

Use the drop down list to switch the external alarm detection. When the external alarm is detected, the alarm will be triggered.

A-5. Ext. Alarm Mode

Use the drop down list to switch the external alarm mode. If the external alarm is setup for normal open, the option has to switch to N.O.; in contrast, the option is setup in N.C.

B. Alarm Output Setup



The "Alarm Output Setup" dialog box is used to configure alarm output settings. It contains two main sections: "Buzzer Time" and "Relay Time". Each section has two rows of settings: "Ext. Alarm" and "Video Loss". Each row includes a numeric spinner set to "5" and a "Sec" label. At the bottom, there are "Save" and "Cancel" buttons.

Buzzer Time	
Ext. Alarm Buzzer Time:	5 Sec
Video Loss Buzzer Time:	5 Sec

Relay Time	
Ext. Alarm Relay Time:	5 Sec
Video Loss Relay Time:	5 Sec

This control item separates into two parts, "Buzzer Time" and "Relay Time". User can press ◀ or ▶ to switch the external buzzer time and video loss buzzer time in "Buzzer Time" option. The adjustment value is from 5 to 99 seconds. Moreover, among "Relay Time" option, the user can press ◀ or ▶ to switch the external buzzer time and video loss buzzer time. The adjustment value is from 5 to 99 seconds as well. The Value of Ext. Alarm Buzzer / Relay Time determine the buzzer / relay time of both external alarm in and digital input (IPCam).

C. Alarm Event Setup



The "Alarm Event Setup" dialog box is used to configure alarm events. It contains a list of events with checkboxes, all of which are checked. The events are: Power On Event, Power Off Event, Video Loss Event, Motion Event, Record Event, Stop Record Event, Digital Input Event, and Ext. Alarm Event. At the bottom, there are "Save" and "Cancel" buttons.

☒ Power On Event	☒ Power Off Event
☒ Video Loss Event	☒ Motion Event
☒ Record Event	☒ Stop Record Event
☒ Digital Input Event	☒ Ext. Alarm Event

When the selected events are happened and triggered, the log will be recorded in the event playback list, and you can use event search in playback to find them.

D. Alarm Action and Trigger Condition List

Action \ Type	Motion detection	External Alarm	DI (IPCAM)	Video Loss
Necessary Condition (All the action below can only be execute when necessary condition is met.)	Camera Setup >> Motion Setup >> Tick "Area 1/2/3" and set up the area	Alarm Setup >> Alarm Trigger Setup >> "Ext. Alarm Detection" set to "Enable"	Alarm Setup >> Alarm Trigger Setup >> "Digital Input (IPCam)" set to "Enable"	Alarm Setup >> Alarm Trigger Setup >> "Video Loss Detection" set to "Enable"

Action \ Type	Motion detection	External Alarm	DI (IPCAM)	Video Loss
Switch to Single Channel Screen / Split Screen	Condition: Alarm Setup >>Alarm Trigger Setup >>"Alarm Auto Switch" set to "Full Screen(/Split Screen)"	X	X	X
Trigger Relay/ Buzzer	Condition: Camera Setup >>Motion Setup >>"Relay(/Buzzer) Dwell" not set to "Off"	(It's enabled as long as Necessary Condition is meet) *p: Trigger length setting: Alarm Setup >>Alarm Output Setup >>Relay(/Buzzer) Time *p : "Ext. Alarm Relay(/Buzzer) Time" length setting determines the trigger lenth of both "External Alarm" and "DI(IPCAM)"		
Written in Log (Can be used for event search playback)	Condition: Alarm Setup >>Alarm Event Setup >>Tick "Motion Even" / "Ext. Alarm Eventt" / "Digital Input Event" / "Video Loss Event"			
Icon on Live Screen				

Action \ Type	Motion detection	External Alarm	DI (IPCAM)	Video Loss
Pre- / Post-alarm Recording	O			Pre-:O Post-:X
Send E-mail / Upload to FTP with Pre-/ Post-alarm Recording (*p[1])	Condition 1: Network Setup >>Mail(/FTP) Setup >>Tick "Motion(/Alarm)"; And Record Setup >>"Record Mode" set to "Manual"; And it's on recording when alarm is triggered Condition 2: Network Setup >>Mail(/FTP) Setup >>Tick "Motion(/Alarm)"; And Record Setup >>"Record Mode" set to "Alarm Trigger" Condition 3: Record Setup >>"Record Mode" set to "Schedule"; And Record Setup >>Schedule Setup >>It's on "Full Rec" or "Alarm Rec" period when alarm is triggered; And Record Setup >>Mail(/FTP) Schedule Setup >>It's on "Motion(/Alarm) Mail(/FTP)" period when alarm is triggered ※It's enabled when both Necessary Condition and one of above three conditions are met. *p: Mail/FTP server setting: Network Setup>>Mail(/FTP) Setup>>Fill in server information *p: Pre- / Post-alarm recording length setting: Record Setup>>Pre(/Post)-Alarm Record Time			X
Http CGI	Network Setup>>HTTP Notification Setup>>Fill in Http server information and tick "Enable"			

***p[1]: Or, in another interpretation way:**

Send E-mail / Upload to FTP with Pre-/ Post-alarm Recording	Condition 1: Record Setup >>"Record Mode" set to "Manual" or "Alarm Trigger". It's not on "Stop Rec" period; And Network Setup >>Mail(/FTP) Setup >>Tick "Motion(/Alarm)" Condition 2: Record Setup >>"Record Mode" set to "Schedule". It's not on "No Rec" period; And Mail(/FTP) Schedule Setup >> It's not on "No Mail(/FTP)" period ※It's enabled when both Necessary Condition and one of above two conditions are met.
---	---

3.6

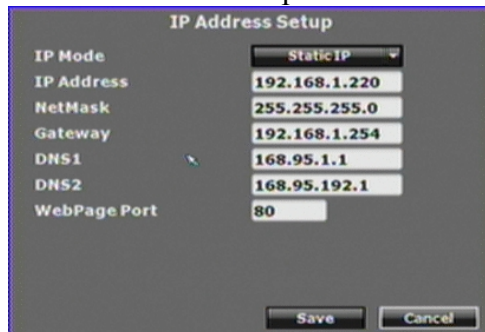


NETWORK SETUP



A. IP ADDRESS SETUP

Press ◀ or ▶ to setup NVR IP address.



A-1. IP Mode

Press drop down list to change IP mode to STATIC IP or DHCP.

A-2. IP Address

Use the virtual keypad to setup the NVR IP ADDRESS.

A-3. Network

Use the virtual keypad to change SUBNET MASK.

A-4. Gateway

Use the virtual keypad to change Default GATEWAY.

A-5. DNS1

Use the virtual keypad to change DNS.

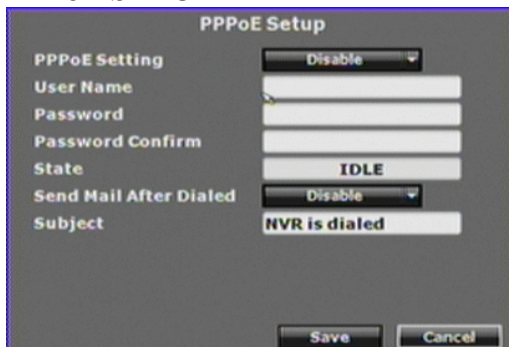
A-6. DNS2

Use the virtual keypad to change OTHER DNS.

A-7. WebPage Port

Use the virtual keypad to change the IE browser port.

B. PPPoE SETUP



B-1. PPPoE Setting

Press the drop down list to enable or disable PPPoE.

B-2. User Name

Insert the user name (ADSL account) which provided from local ISP.

B-3. Password

Insert the password which provided from local ISP.

B-4. Password Confirm

Insert the password again to confirm the password.

B-5. State

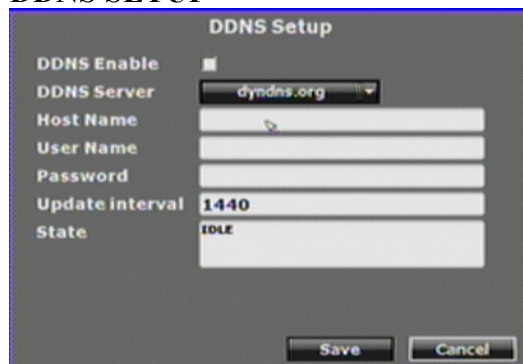
Present the current status of PPPoE function.

B-6. Send Mail After Dialed

Click the drop down list to enable or disable the function.

B-7. Subject

Insert the mail subject when dialed successfully.

C. DDNS SETUP**C-1. DDNS Enable**

Click the checkbox to enable or disable DDNS function.

C-2. Provider

Click the drop down list to select DDNS provider.

C-3. Host Name

Insert the registered host name in the selected provider.

C-4. User Name

Insert the registered user name in the selected provider.

C-5. Password

Insert the registered password in the selected provider.

C-6. Update Interval

A period of time to update IP address.

C-7. State

The state after apply for DDNS.

Updating: Information update.

Idle: Stop service.

DDNS registered successfully, now log by

<http://<username>.ddns.camddns.com>: Registered successfully.

Updating Failed, the name is already registered.

Updating Failed, please check your internet connection.

D. MAIL SETUP

The image shows a 'Mail Setup' dialog box. It has a title bar 'Mail Setup'. Below the title bar, there are two checkboxes: 'ALARM' and 'MOTION', both of which are checked. Below these are several text input fields: 'Mail Server', 'SMTP Port' (with the value '25' entered), 'Username', 'Password', 'Sender's Mail', 'Receiver's Mail', 'BCC Mail', and 'Subject'. The 'Subject' field contains the text 'ALARM TRIGGER!'. At the bottom right, there are two buttons: 'Save' and 'Cancel'.

D-1. Enable

Tick “Alarm” to send video to the mail address when external alarm or DI from IPCam is triggered. Tick “Motion” to send video to the mail address when motion detection is triggered.

D-2. Mail Server

The IP address of Mail Server

D-3. SMTP Port

The port of SMTP (known as Simple Mail Transfer Protocol). (Default value is 25)

D-4. User Name

The user name while log in to the mail server.

D-5. Password

The password while log in to the mail server.

D-6. Sender's Mail

The sender's account when send the mail via this mail server.

D-7. Receiver's Mail

The receiver's mail address.

D-8. BCC Mail

The receiver's mail address for Bcc Mail.

D-9. Subject

The subject while sending the mail.

E. FTP SETUP

The image shows an 'FTP Setup' dialog box. It has a title bar 'FTP Setup'. Below the title bar, there are two checkboxes: 'ALARM' and 'MOTION', both of which are checked. Below these are several text input fields: 'FTP Server', 'Username', 'Password', 'FTP Port' (with the value '21' entered), and 'Path' (with the value '/ALARM/' entered). At the bottom right, there are two buttons: 'Save' and 'Cancel'.

E-1. Enable

Tick “Alarm” to upload video to FTP when external alarm or DI from IPCam is triggered. Tick “Motion” to upload video to FTP when motion detection is triggered.

E-2. FTP Server

The IP address of FTP Server.

E-3. User Name

The username while log in to the ftp server.

E-4. Password

The password while log in to the ftp server.

E-5. FTP Port

The port number of file transmission. (Default value is 21)

E-6. Path

The ftp path where the user wants to reserve the information.

F. DHCP Server Setup



F-1. Enable

Use the checkbox to enable or disable DHCP Server function. When the function is activated, the NVR can be treated as the DHCP server. The NVR will assign or distribute one of the IP address which is according to the setup IP address range (start and end IP Address.) to the connecting IPCAM (setup DHCP function as well).

To use DHCP server function, the IP address of NVR itself has to be static IP.

F-2. Start IP Address

Use the virtual keypad to insert the start IP Address of DHCP server.

F-3. End IP Address

Use the virtual keypad to insert the end IP Address of DHCP server.

F-4. Lease Time

Press ◀ or ▶ to change the lease time of DHCP server.

G. UPNP Port Forwarding Setup



G-1. Enable

Use the checkbox to enable or disable UPNP port setup.

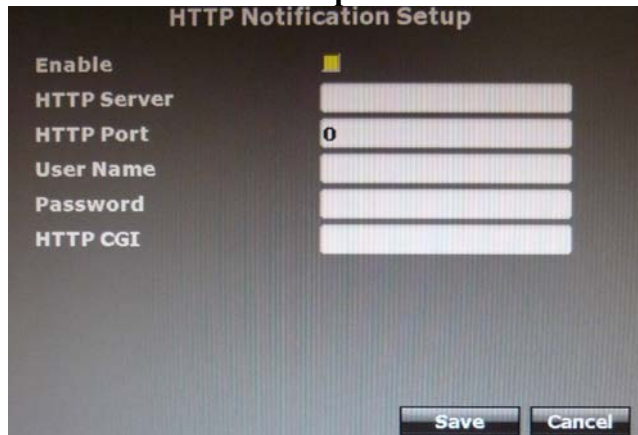
G-2. External HTTP Port

Use the virtual keypad to insert the external http port.

G-3. External RTSP Port

Use the virtual keypad to insert the external rtsp port.

H. HTTP Notification Setup



HTTP Notification Setup

Enable ☐

HTTP Server

HTTP Port

User Name

Password

HTTP CGI

Save Cancel

H-1. Enable

Use the checkbox to enable or disable HTTP Notification. This function allows users to set up the CGI command to a HTTP server. The server can be any device that can receive CGI via HTTP protocol. When alarm events happen, NVR sends CGI to that server.

H-2. HTTP Server

Key in the server IP address.

H-3 HTTP Port

Key in the server port used for http protocol.

H-4 User Name

Key in the server username.

H-5 Password

Key in the server password.

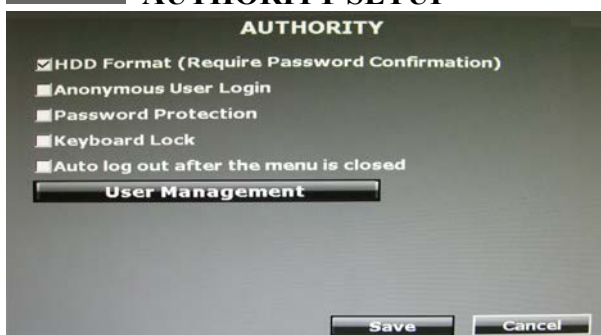
H-6 HTTP CGI

Key in the CGI that you would like to send to the server when alarm events happen.

3.7



AUTHORITY SETUP



A. HDD Format

Use the checkbox to enable or disable the authority of HDD Format function. If enable this function, the user has to insert password while performing HDD format.

B. Anonymous User Login

Use the checkbox to enable or disable the authority of anonymous user login. If enable this function, the user does not have to insert the username/ password and can view the live image via IE browser.

C. Password Protection

Use the checkbox to enable or disable the authority of password protection.

D. Keyboard Lock

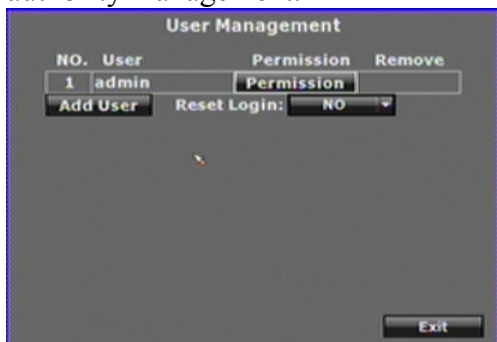
Use the checkbox to enable or disable the operation of control bar which is in the right hand side of live view. The control bar can not work when keyboard lock is activated.

E. Auto Logout

Use the checkbox to enable or disable the operation. If enabled, the system will log out automatically after the menu closed.

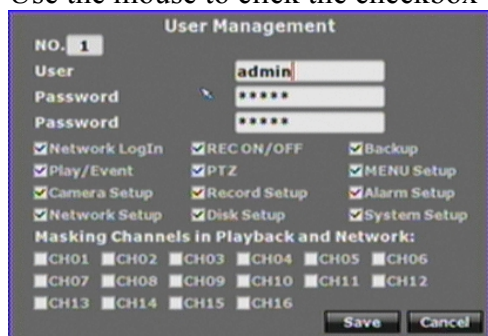
F. User Management

Among this item, user can setup the user management permission and the user authority management.

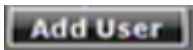


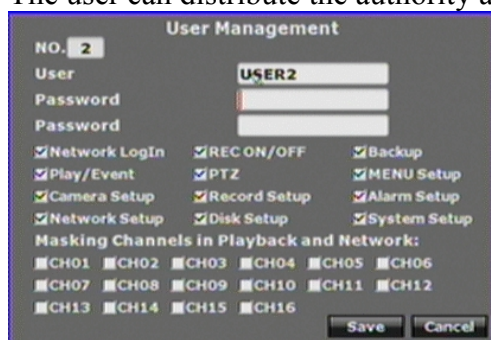
F-1. Permission

Use the mouse to click the checkbox to modify and alter the user authority.



F-2. Add User

After click  button, the setup page will present in the following.
The user can distribute the authority and the permission for the new user.



The image shows a 'User Management' dialog box. At the top, it says 'NO. 2'. Below that, there are fields for 'User' (containing 'USER2'), 'Password', and another 'Password' field. A list of permissions follows, each with a checked checkbox: Network LogIn, REC ON/OFF, Backup, Play/Event, PTZ, MENU Setup, Camera Setup, Record Setup, Alarm Setup, Network Setup, Disk Setup, and System Setup. Below the permissions is a section titled 'Masking Channels in Playback and Network:' followed by checkboxes for channels CH01 through CH16. At the bottom right are 'Save' and 'Cancel' buttons.

NO.	User	Password	Password	Permissions	Masking Channels
2	USER2			☒ Network LogIn ☒ REC ON/OFF ☒ Backup ☒ Play/Event ☒ PTZ ☒ MENU Setup ☒ Camera Setup ☒ Record Setup ☒ Alarm Setup ☒ Network Setup ☒ Disk Setup ☒ System Setup	☐ CH01 ☐ CH02 ☐ CH03 ☐ CH04 ☐ CH05 ☐ CH06 ☐ CH07 ☐ CH08 ☐ CH09 ☐ CH10 ☐ CH11 ☐ CH12 ☐ CH13 ☐ CH14 ☐ CH15 ☐ CH16

3.8



DISK MANAGEMENT



A. Overwrite Mode

Select “ON”, then the oldest recording data will be overwritten by new recording data. Select “OFF”, then NVR will stop writing recording data into HDD when the HDD is full.

B. Hard Disk Full Warning

Under non-overwrite mode, click the drop down list to change value to 20%/ 15%/ 10% or 5% . When the HDD space is less then setting ratio, the buzzer buzzes.

C. Auto Deletion

Select “ON”, then on the playback list, users cannot find the recording data that is older than the reserve day.

For example, it's 2012/10/19 17:40 now. Auto deletion is set as on, and reserve day is set as 3. The recording data which recording time is order than 2012/10/16 17:40 will not be indicated on the playback menu.

D. Reserve Day

Use ◀ or ▶ to setup the reserve day between 1~30 days.

Note: If the “Overwrite Mode” is set OFF and NVR keeps recording, the HDD will finally get full regardless that “Auto Deletion” is ON.

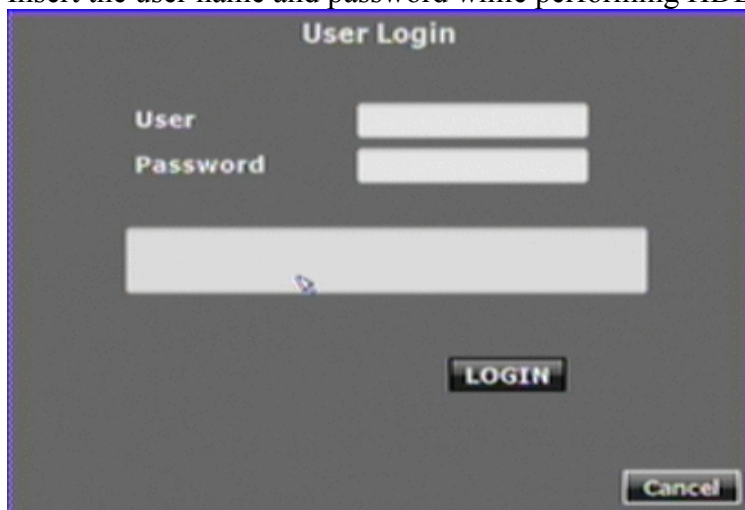
E. Storage Information

The information of storage device will present in this page.



F. Format HDD

Insert the user name and password while performing HDD format function.



A screenshot of a 'User Login' dialog box. The dialog has a dark gray background with a blue border. At the top, the title 'User Login' is centered in a light gray font. Below the title, there are two labels: 'User' and 'Password', both in a light gray font. To the right of each label is a white rectangular input field. Below these two fields is a single, wider white rectangular input field. At the bottom center of the dialog is a black button with the word 'LOGIN' in white capital letters. In the bottom right corner is a smaller black button with the word 'Cancel' in white capital letters.

3.9



SYSTEM SETUP

A. NVR Name

Use the virtual keypad to insert the name of the NVR.

B. NVR ID

Use ◀ or ▶ to setup the NVR ID. When you have several NVR, use ID to distinguish them when you operate remote controller or other device.

C. Language

Use the drop down list to change the NVR language. Currently, there are English, Traditional Chinese and Simplified Chinese three options.

D. Date Format

Use the drop down list to change DATE. There are DD/MM/YYYY, YYYY/MM/DD and MM/DD/YYYY three modes.

E. Version

The firmware version of the NVR will show in this column.

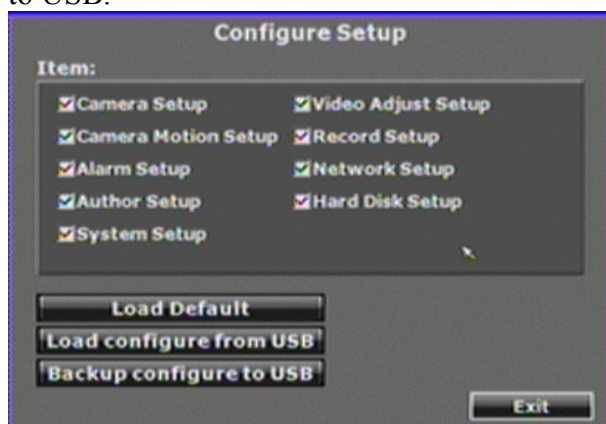
F. Software Update

Click  button to perform firmware updating.

G. Configure Setup

Click the checkbox to select which item can be setup by the user. The user can also load the setting to factory default, load the configure from USB and backup configure

to USB.

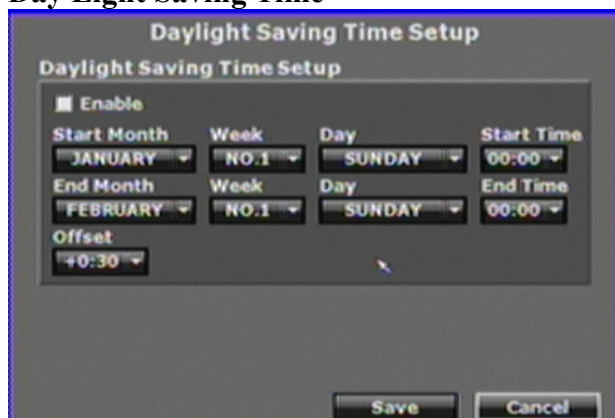


H. Time Setup



Click **SYNC** button within “Time” block can adjust and synchronize the time of the NVR as the system time of the PC. Moreover, if the user clicks the enable checkbox and **SYNC** button within the NTP Setup block, the time of the NVR will synchronize as the NTP Server.

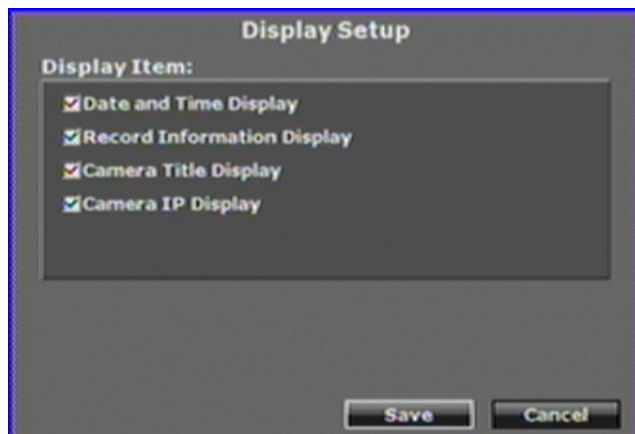
I. Day Light Saving Time



After enable the daylight saving time function, the user can use the drop down list to select the start time and the end time of daylight saving time. After complete the setting, please click **Save** button to reserve the setting.

J. Status Display Setup

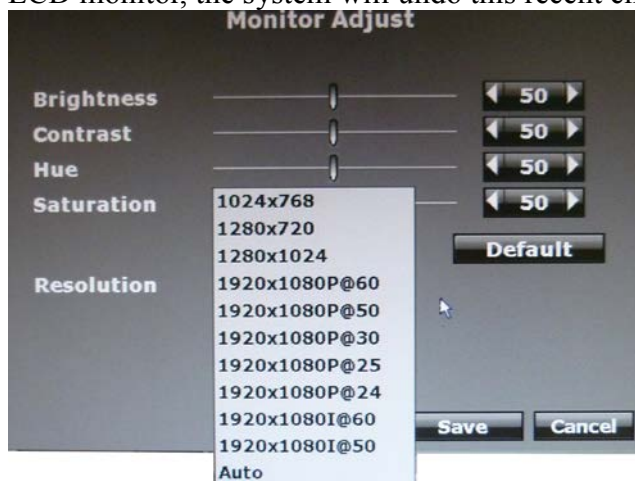
Select what will be displayed on the live screen.



K. Monitor Adjust

User can use ◀ or ▶ to adjust the monitor related setting within this page, there are “Brightness”, “Contrast”, “Hue” and “Saturation” four options can be set.

You can also adjust Resolution here. Please check the frame rate that your LCD monitor support before you select. If you select a resolution not compatible with the LCD monitor, the system will undo this recent change automatically.



3. EX



DEBUG MESSAGE

The purpose of the following procedure is to export a HDD debug message file. If user has problems with the NVR, the technical person can analysis the file and might find the cause of problem.

- Plug in a USB disk.
- Enter the Authority Setup page and make sure the option “HDD Format (Require Password Confirmation)” is ticked.



- Enter the Disk Setup page. Click “Format HDD”.



- Key in “@k” in the user name column to login. No password is required.



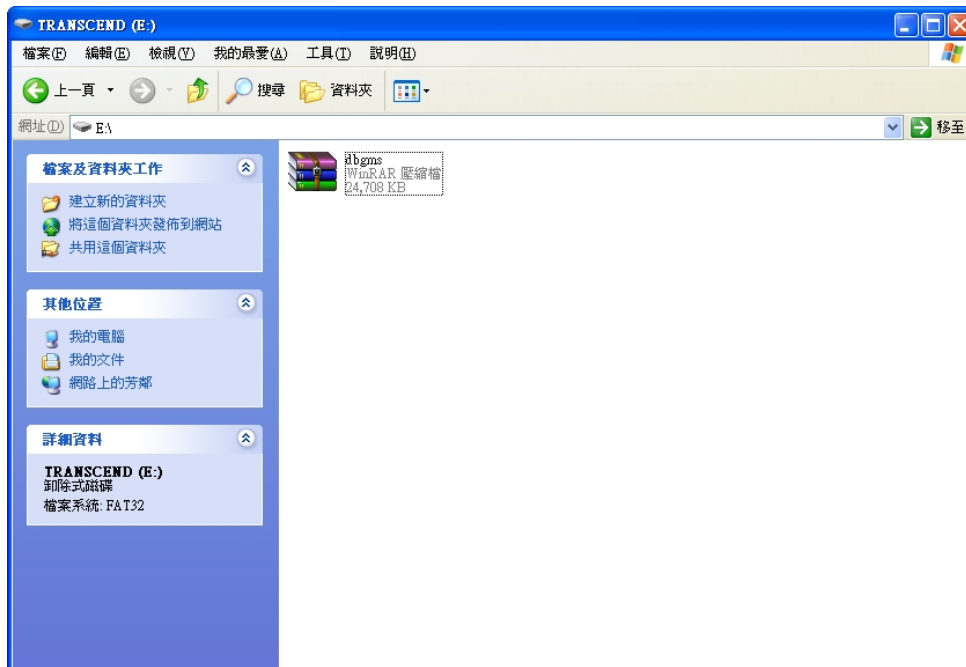
- The screen turns to Advance Setup page. Click download. It takes about 10 seconds to export the file.



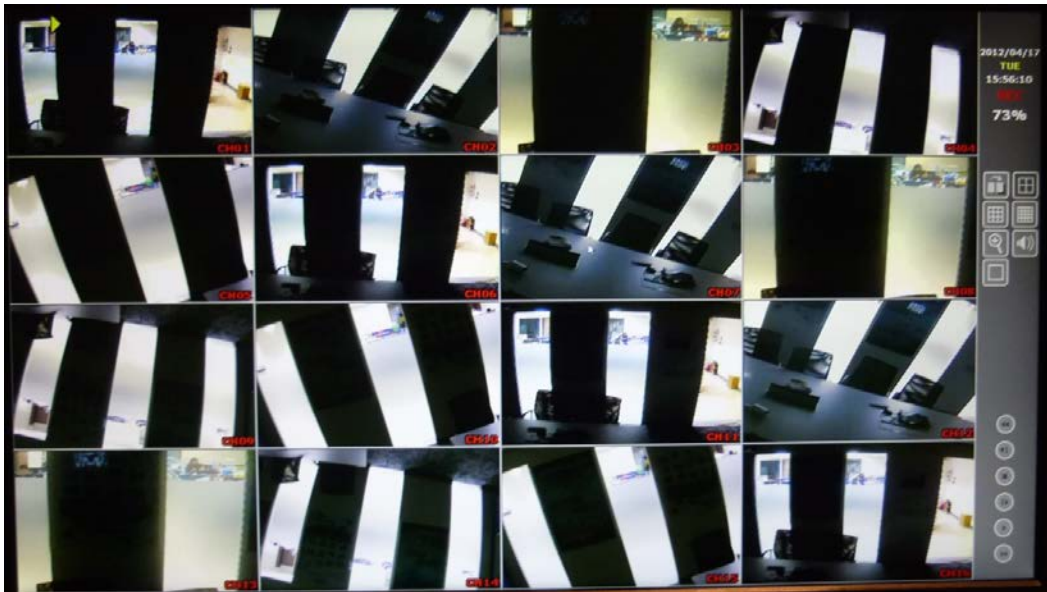
- When the downloading is complete, a message pops up to remind the user. Click” OK”.



- Now the debug message file should have been in your USB disk. Please turn the file” dbgms.tar” to HUNT’s technical person.



4 NVR PLAYBACK



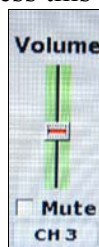
Note: Under playback mode, it will output sound when switch to full screen mode.

A. RECORD BACKUP

With playback mode, press this button to backup record (.ha0 video backup) and press this button again to finish backup. For performing the single image backup (.jpg single image backup), press  first and then click this button to backup the necessary image.

B. AUDIO VOLUME

Press this button, and the audio volume control board will pop up.



C. DISPLAY CONTROL

Within playback mode, use display control to switch the camera channel.

D. DIGITAL ZOOM

In the live full screen mode, left-click the button of the mouse to pull a range to zoom in or zoom out the image. User can right-click the button of the mouse to disable this function. (NOTE: Using the mouse to operate digital zoom can zoom in to max. 16 times.) Moreover, user can also use ZOOM key on the front panel to perform this function. (First, click ZOOM Key and then click ▲▼◀▶ key to select zoom in or zoom out position. Finally, click ENTER key to complete the setting. Moreover, click ZOOM Key again can disable digital zoom function. Using the panel key to perform zoom in function is fixed at

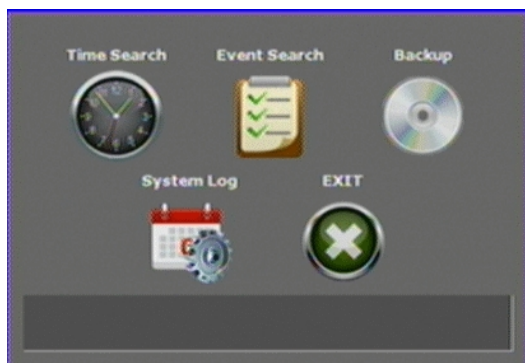
2 times.)

E. **FULL SCREEN**

Press the bottom for full-screen mode.

F. **RECORD AND PLAYBACK CONTROL**

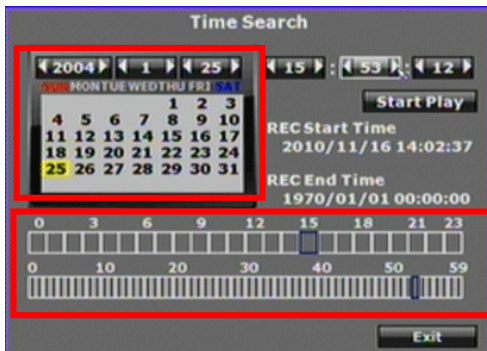
Same as front panel controller and remote controller.





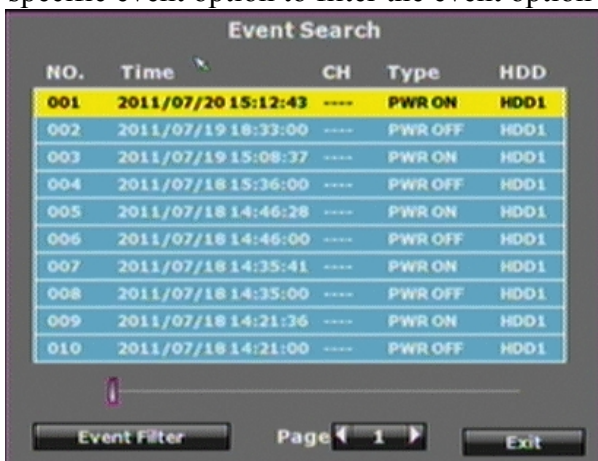
4.1 TIME SEARCH

Select the start of playback time and then click **Start Play** button to playback the recorded data. If the time contains the recorded data, the time point within this page will become red.



4.2 EVENT SEARCH

After entry to the event search page, user can click the event log item which shown on the list to start playback. Moreover, the user could click **Event Filter** button to select the specific event option to filter the event option that shown on the list.



4.3

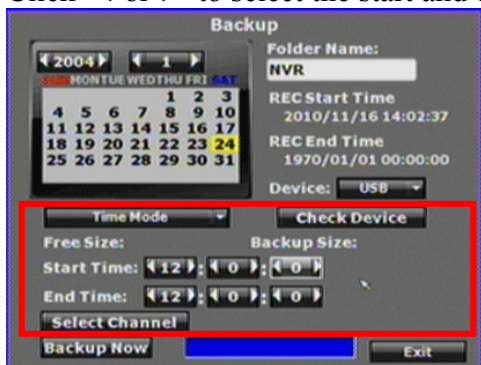


BACKUP

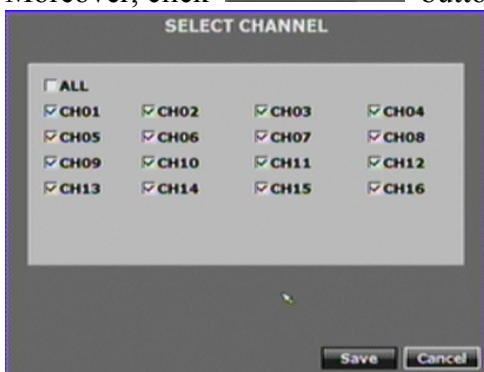
After click the backup button, the user could use drop down list to select the storage device, USB/ DVD-RW (08CH/ 16CH models) and the backup time selection mode, Time Mode/ Hours Mode. After that, click **Backup Now** button to start backup.

TIME MODE

Click ◀ or ▶ to select the start and end backup time.

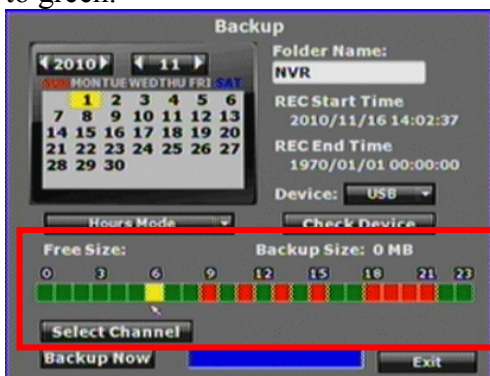


Moreover, click **Select Channel** button to select the channel which is going to backup.



HOURS MODE

When the user moves the mouse on the time chart, the color will become to yellow; if the user select and click the time point which is going to backup, the color is presented in red; moreover, if the user wants to cancel the setup backup time point, the color will become to green.



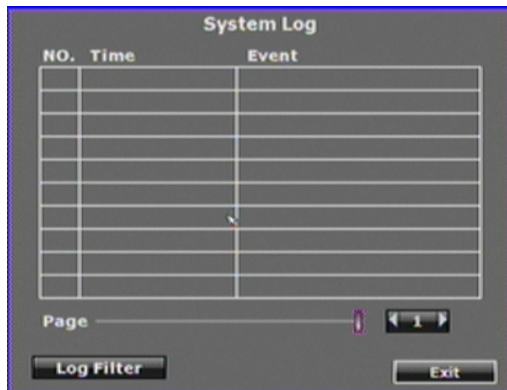
4.4



SYSTEM LOG

System log is reserved all of the system record. The maximum storage quantity is 2000.

Click **Log Filter** button to perform the further data filter action. After complete the specific item selection, please click **Save** button to reserve the setting. While return to the system log page, it will only reveal the specific selection items.



After click **Log Filter** button



5 BACKUP PLAYBACK

SYSTEM REQUIREMENT

CPU: Intel Celeron 1.6G

MEMORY: 256MB.

VGA: 32MB

VGA RESOLUTION: 1024 x 768.

OS: Windows XP / 2000 or above

SUGGESTED REQUIREMENT

CPU: Intel P4 2.8G

MEMORY: 512MB or above

VGA: 64MB or above

VGA RESOLUTION: 1024 x 768

OS: Windows XP / 2000 or above

NETWORK BANDWIDTH: Upload Speed is 256kbps or above

5.1 MAIN SCREEN SETTING



The player (D6Viewer.exe) is used to play the NVR backup video. D6Viewer.exe can be obtained via the Internet; moreover, while performing USB backup and DVD-RW backup, the software will be built automatically as well.

A. MAIN SCREEN

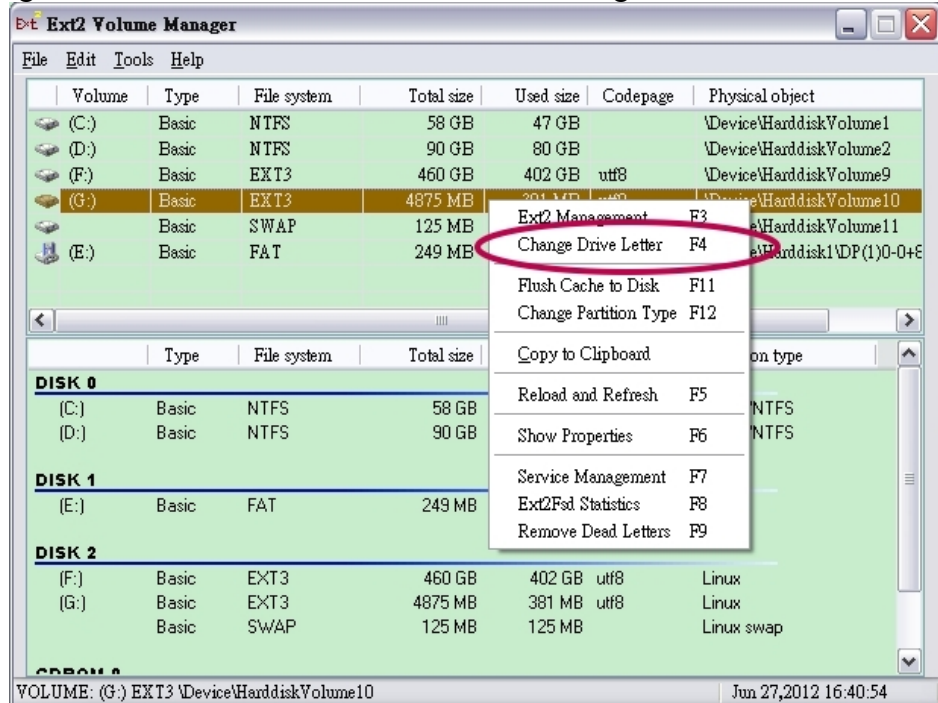
Open the D6Viewer. Use Overlay mode can improve the system resource performance.



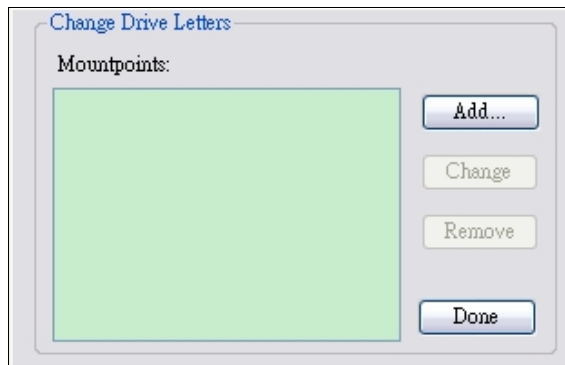
B. HDD PLAY

1. Remove the NVR HDD and connect it to the PC. The NVR HDD is Linux format, so the Windows system may not know it. Please use the software “Ext2Fsd” to assign a drive letter to the HDD. “Ext2Fsd” is in the attached CD or can be downloaded from the Internet.

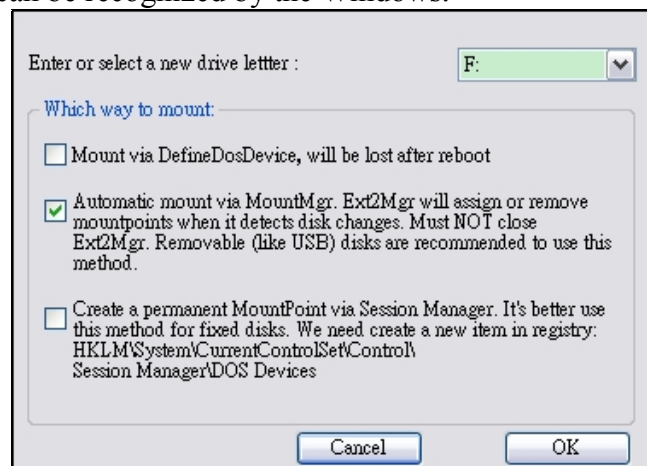
- Start the Ext2Fsd, and it will detects all the disks connected with your PC. Right-click on the NVR HDD and choose “Change Drive Letter”.



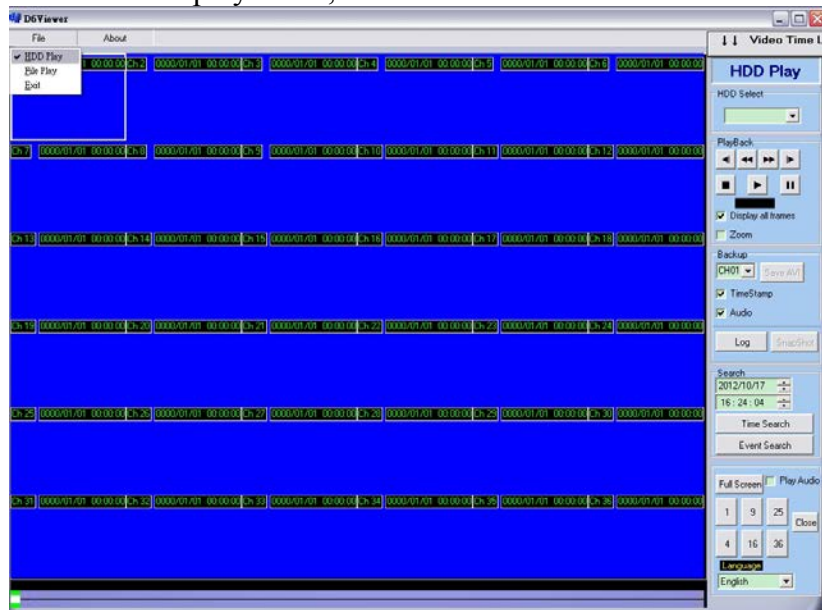
- Click “Add”



- Assign a letter to the HDD, then click OK so that the HDD get the letter and can be recognized by the Windows.

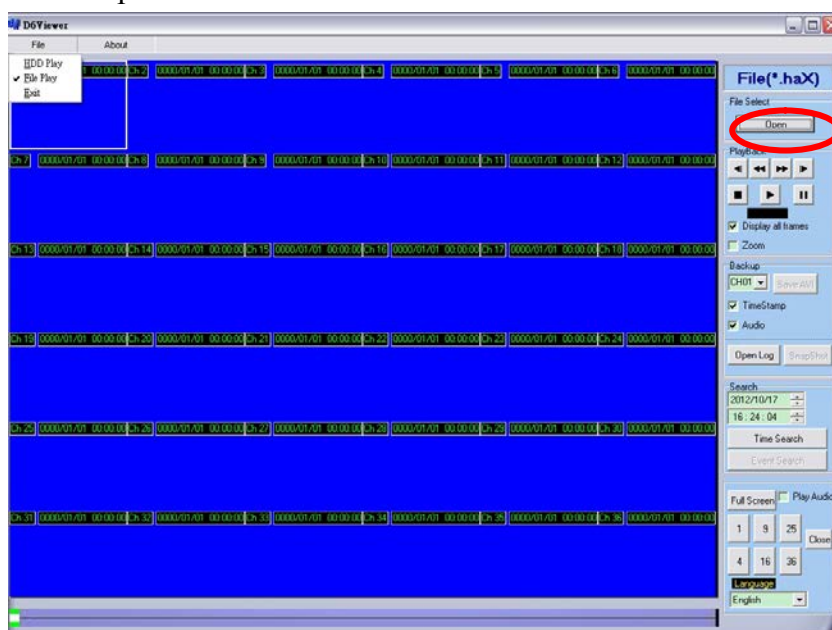


2. Under HDD play mode, select the NVR HDD to load the video file in the HDD.

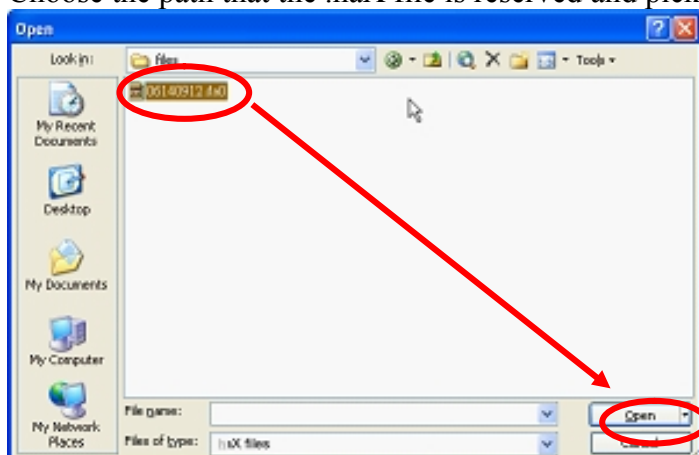


C. File Play

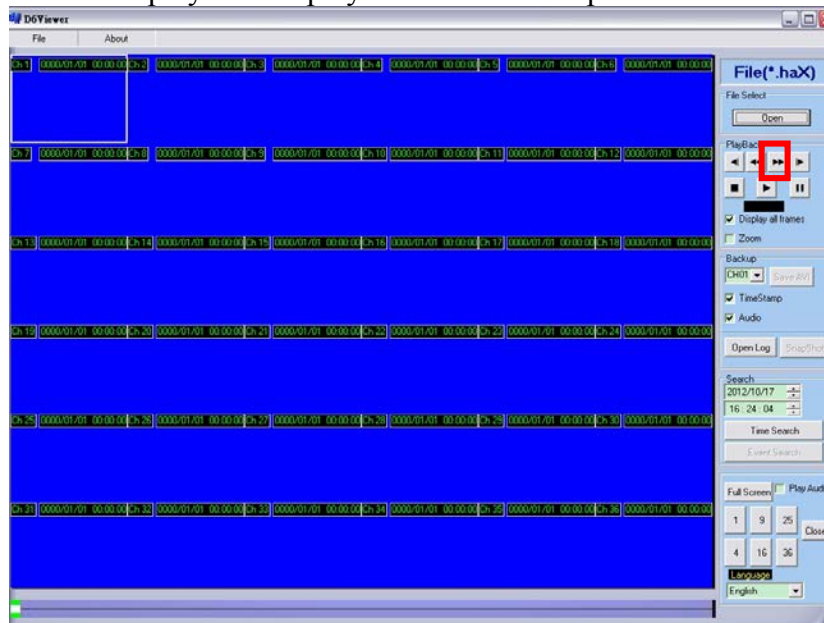
1. You can use D6Viewer to open a single video backup file. Under file play mode, select "Open".



2. Choose the path that the .haX file is reserved and pick the file to playback.



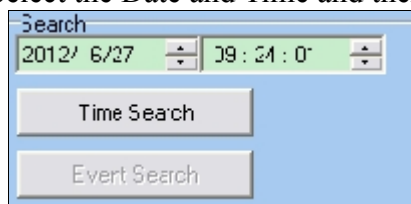
3. Press the play icon to play the video or still picture.



5.2 PLAYBACK OPERATION

A. TIME SEARCH

Select the Date and Time and then click **Time Search** to play the film.



B. EVENT SEARCH

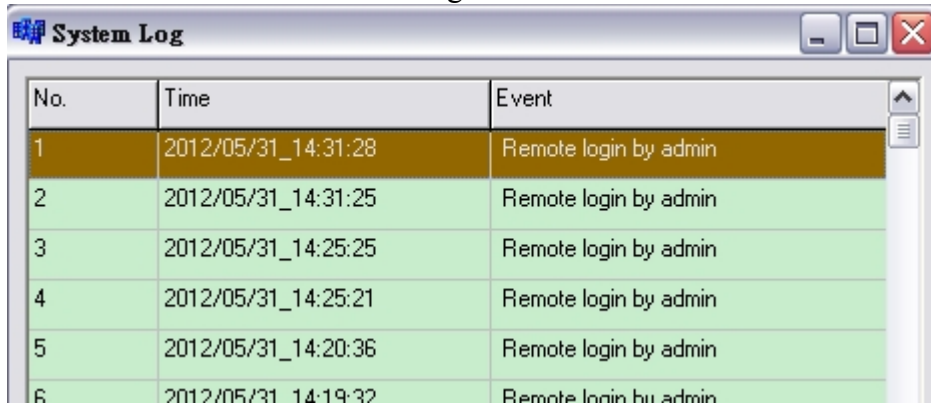
It will display all the events which are reserved within the NVR HDD after

press **Event Search** (Shown in the following) and double click left button of mouse to trigger event.

Num	Channel	Time	Type
1	255	2008/02/25_09:53:29	POWER ON
2	255	2008/02/25_09:53:38	POWER ON
3	255	2008/02/25_09:54:56	POWER ON
4	255	2008/02/25_09:56:09	POWER ON
5	255	2008/02/25_09:58:05	POWER ON
6	255	2008/02/25_10:02:45	POWER ON
7	255	2008/02/25_10:13:05	POWER ON
8	255	2008/02/25_10:15:33	POWER ON
9	255	2008/02/25_10:35:06	POWER ON
10	255	2008/02/25_10:37:42	POWER ON
11	255	2008/02/25_10:47:21	POWER ON
12	255	2008/02/25_10:49:25	POWER ON
13	255	2008/02/25_10:51:11	POWER ON
14	255	2008/02/25_10:54:16	POWER ON
15	255	2008/02/25_10:58:08	POWER ON
16	255	2008/02/25_11:00:02	POWER ON
17	255	2008/02/25_11:04:15	POWER ON
18	255	2008/02/25_11:05:35	POWER ON
19	255	2008/02/26_10:28:44	POWER ON

C. LOG

Click  to check the log records.

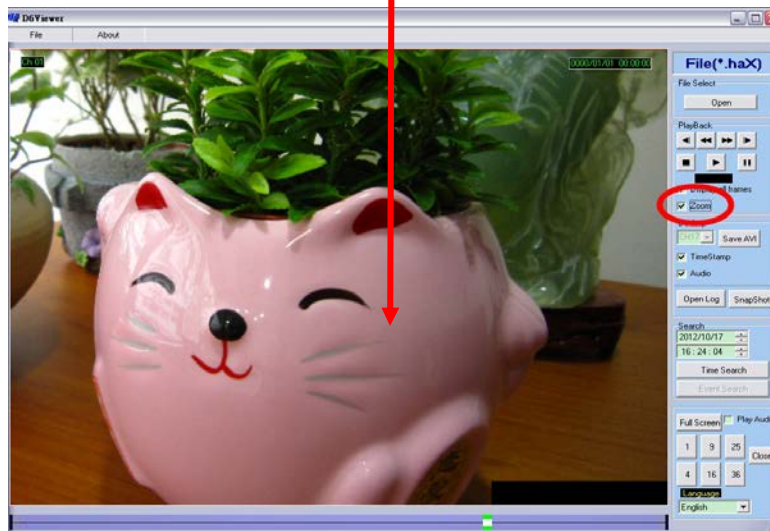
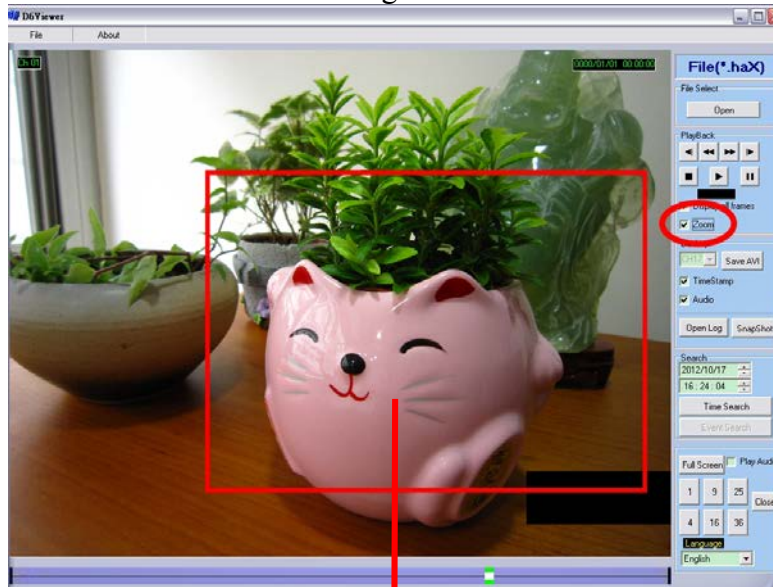


The System Log window displays a table of log entries. The table has three columns: No., Time, and Event. The entries are as follows:

No.	Time	Event
1	2012/05/31_14:31:28	Remote login by admin
2	2012/05/31_14:31:25	Remote login by admin
3	2012/05/31_14:25:25	Remote login by admin
4	2012/05/31_14:25:21	Remote login by admin
5	2012/05/31_14:20:36	Remote login by admin
6	2012/05/31_14:19:32	Remote login by admin

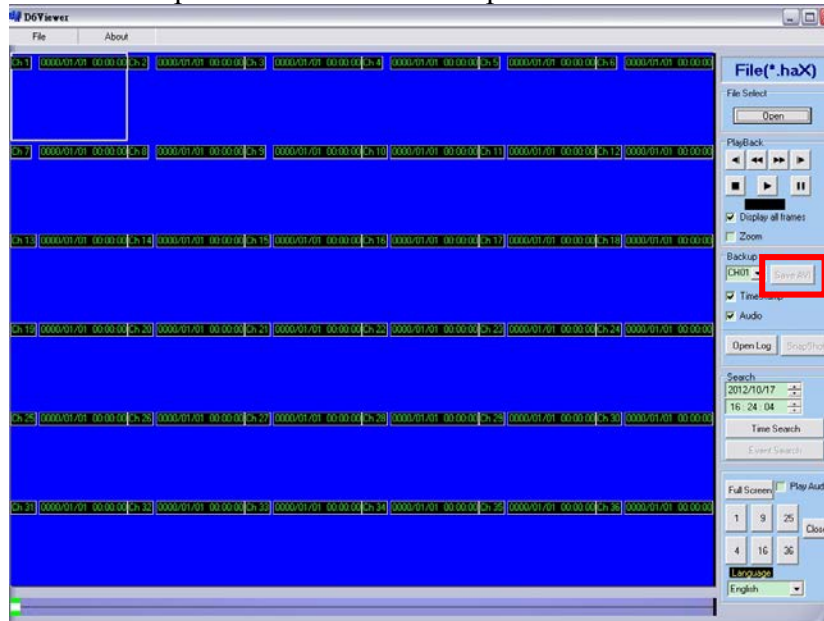
D. ZOOM

Tick the “Zoom” box and drag an area on the screen. Click the area to zoom in.

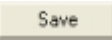


E. BACKUP FILE TO AVI

1. Please select specific channel to backup.



2. During video playback mode please press AVI bottom  to start.

3. Make up a filename and path than press  bottom to start AVI backup.

4. Press AVI bottom  to finish backup.

6 NETWORK VIEWING & PLAYBACK

SYSTEM REQUIREMENT

CPU: Intel Celeron 1.6G

MEMORY: 256MB.

VGA: 32MB

VGA RESOLUTION: 1024 x 768.

OS: Windows XP / 2000 or above

SUGGESTED REQUIREMENT

CPU: Intel P4 2.8G

MEMORY: 512MB or above

VGA: 64MB or above

VGA RESOLUTION: 1024 x 768

OS: Windows XP / 2000 or above

NETWORK BANDWIDTH: Upload Speed is 256kbps or above

6.1 IP ADDRESS SETUP ON PC SITE

Install cameras inside in LAN or use network cable to connect with PC. This is for IPInstallerEng.exe to set up IP address of cameras. If OS is Windows XP SP2 or above, the following Windows Security Alert will popup. Then, please click on **Unblock**.



Then, IPInstallerEng.exe will popup:
NVR default IP address is 192.168.1.220

IP Installer V2.2

Device lists:

Server Name	IP Address
wenhao_HWS-01HT	192.168.001.239
HDR-04FE 80	192.168.001.225
DVR	192.168.001.220
HWS-04HD	192.168.003.233
熱機中_860	192.168.001.218
SHOWROOM 810	192.168.001.155
IP_Camera_rince	192.168.001.160
IP_Camera (POE)	192.168.001.226
IP-Camera	192.168.003.248
IP-Camera	192.168.003.246
Web_Server	192.168.003.222
Web_Server	192.168.003.221
SHOWROOM_16MS	192.168.001.158

Static DHCP

Name: DVR

IP: 192 168 1 220

Netmask: 255 255 255 0

Gateway: 192 168 1 254

DNS 1: 168 95 1 1

DNS 2: 168 95 192 1

Port1: 80

MAC: 00:0F:0D:10:6B:B2

Search Device Submit

To Change Device Name, IP address, and Gateway:
 1. Select the device on the left side.
 2. Change network parameter on the right side.
 3. Press Submit button.
 4. Press "Search Device" to re-search again.
 5. Double click the device to open it.

Exit

NOTE: Please input correct network parameters without blank spaces.

On Device Lists, it lists all servers. Click on one server and then its IP setting will show on the right side. After editing the parameters and clicking on Submit, the following dialogue box will popup. And, it will reboot the device with new parameters.

IPInstallerEng

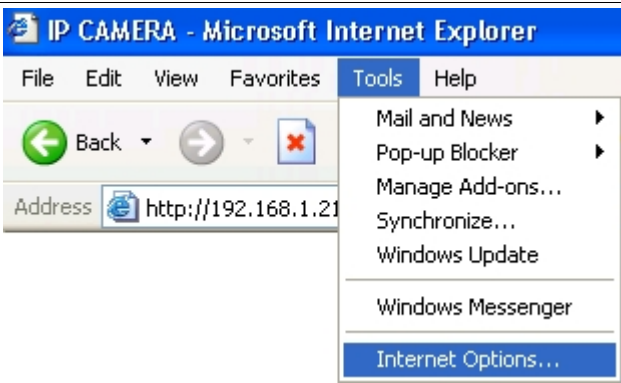
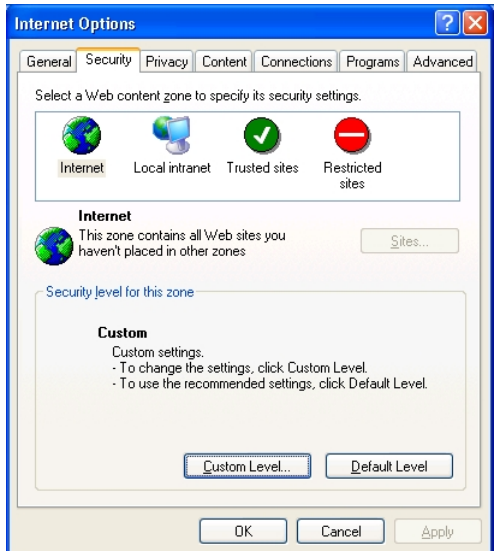
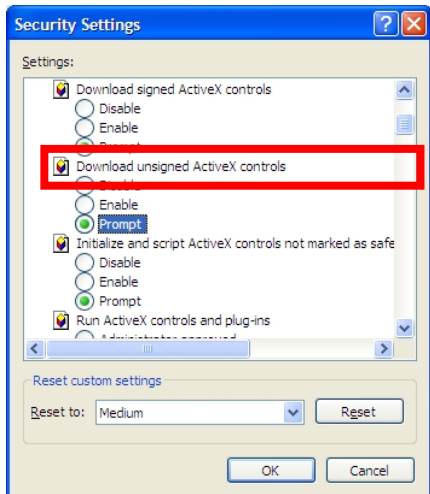
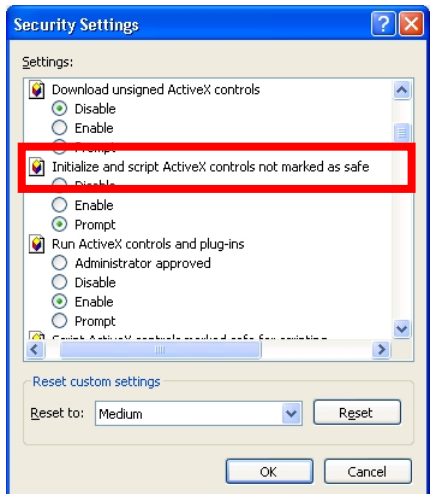
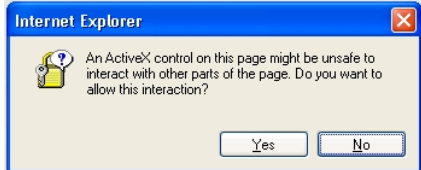
Device Rebooting..., Please wait

OK

6.2 OPTIONAL MICROSOFT INTERNET EXPLORER SETUP

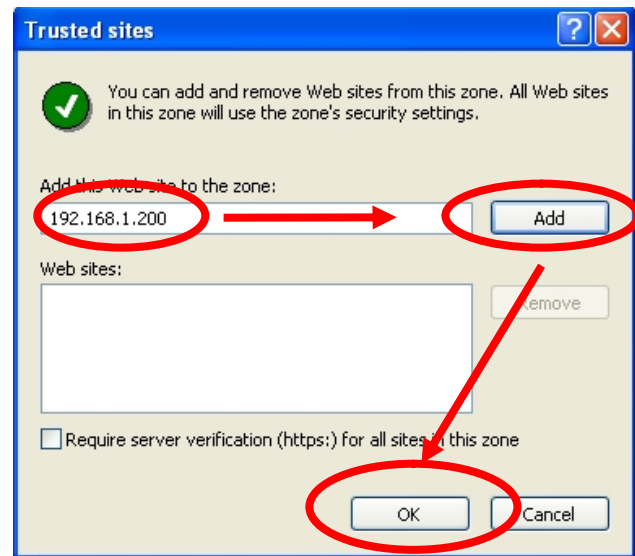
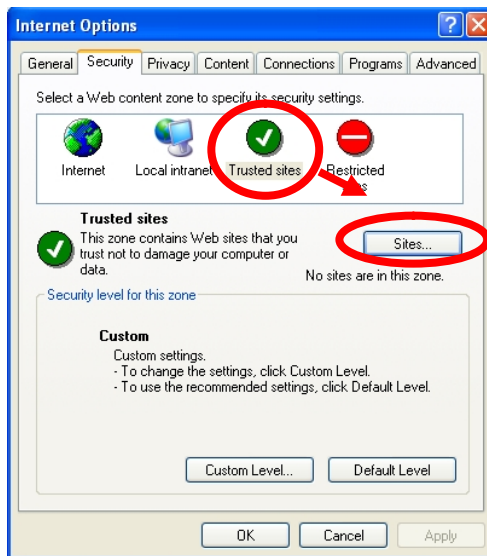
OPTION 1: DISABLE ACTIVEX WARNING

- A. IE → Tools → Internet Options → Security → Custom Level → Security Settings → Download unsigned ActiveX controls → Enable or Prompt (recommend).
- B. IE → Tools → Internet Options → Security → Custom Level → Security Settings → Initialize and script ActiveX controls not marked as safe → Enable or Prompt (recommend).

1 	2 
3 	4 
5 Above three options are all based on select as the prompt. As indicated in the dialogue box. Please select "YES." 	

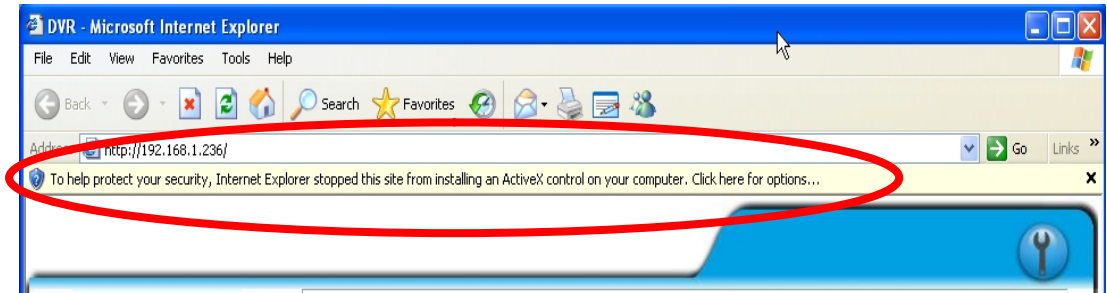
OPTION 2: ADD TO TRUSTED SITES

IE → Tools → Internet Options → Security → Trusted sites → Sites

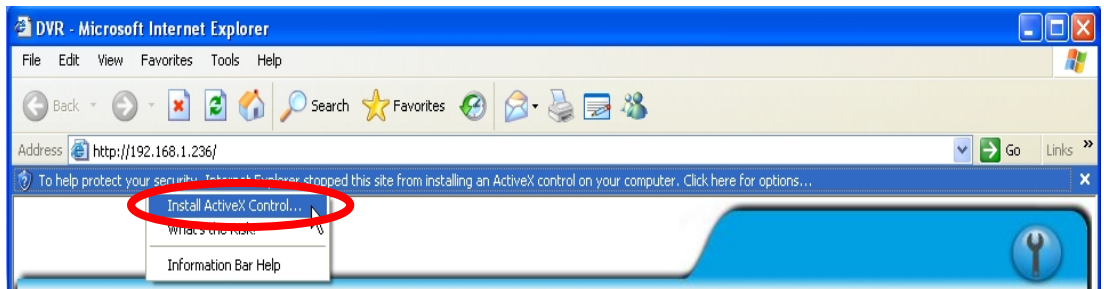


6.3 LOGIN

A. INSTALL ACTIVEX



B. START INSTALL ACTIVEX



C. ACCOUNT & PASSWORD LOGIN

After IP setup and connect to network or LAN, type IP address on IE Browser directly. The following User name & Password Login window will popup.

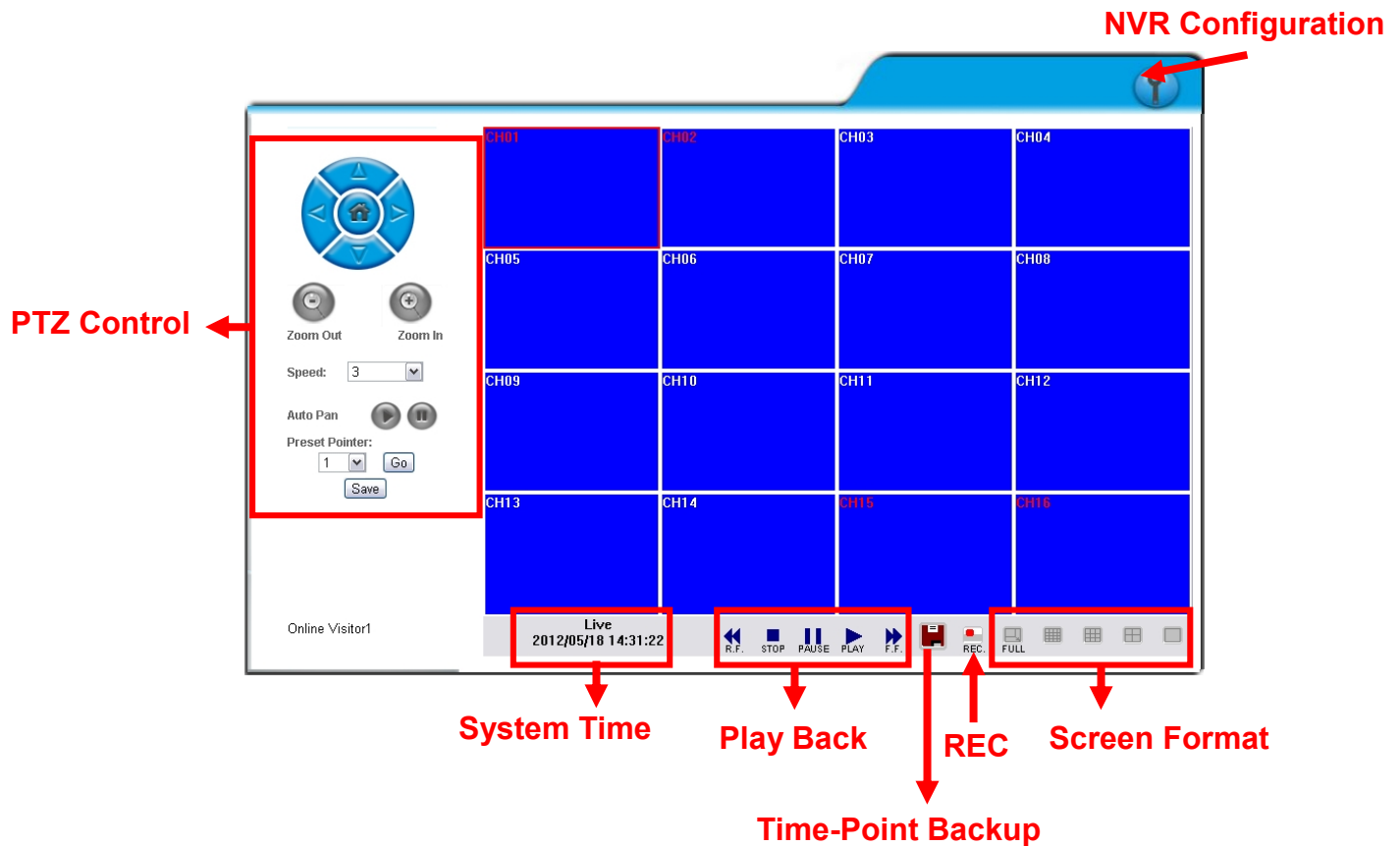


Default user name: admin

Default password: admin

6.4 REMOTE CONTROL

LIVE VIEWING

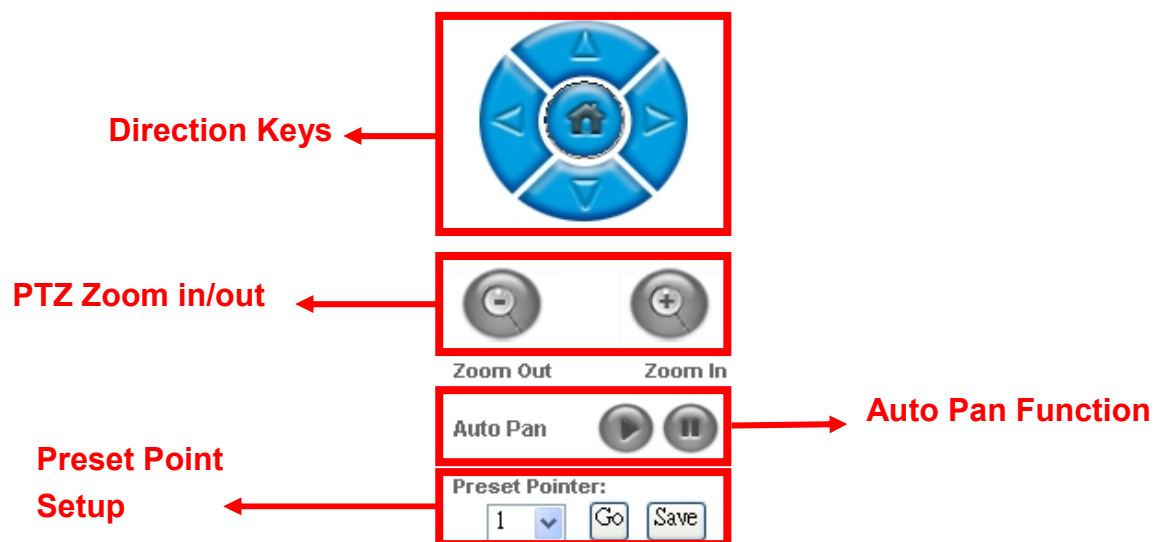


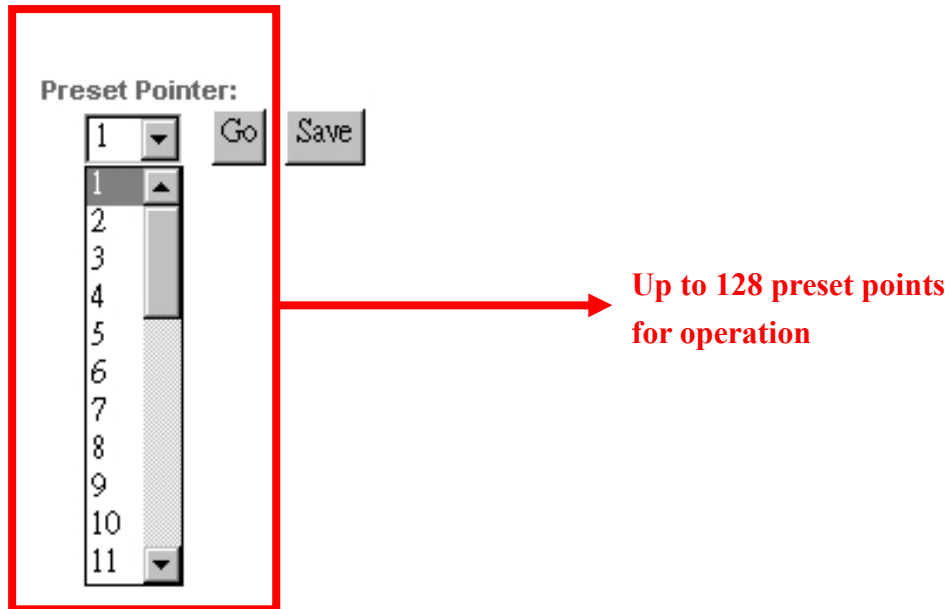
A. NVR Configuration

Get into NVR network menu.

B. PTZ Control

PTZ control function panel





C. SYSTEM TIME

Live viewing mode: The current live viewing time.

D. SCREEN FORMAT

Switch screen format and click twice to switch different channels with full screen.

- E.**  **Full Screen.**
Click again to return.

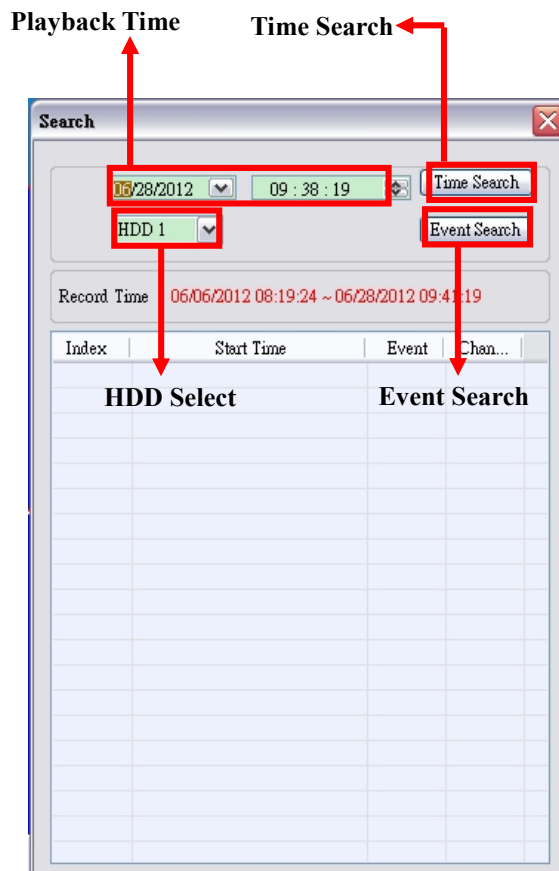
- F.**  **REC.**
Click to start record the live video to the PC or storage device. The saved file is *.ha0 file.

- G.**  **Playback**
Click and select time playback or event playback.

- H.**  **Time-Point Backup**
Click to select backup time point. The saved file is *.ha0 file.

PLAYBACK by TIME SEARCH & EVENT SEARCH

Click , and the playback window will popup



A. HDD Select

User can select HDD1 or HDD2 for playback

B. Playback Time

User can select the time then press “Time Search” for playback.

C. Time Search

User can select the time then press “Time Search” for playback.

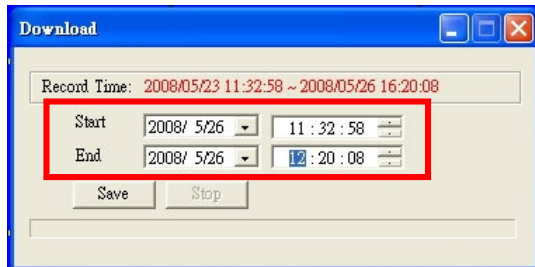
D. Event Search

User can select event item by pressing “Event Search” for playback.

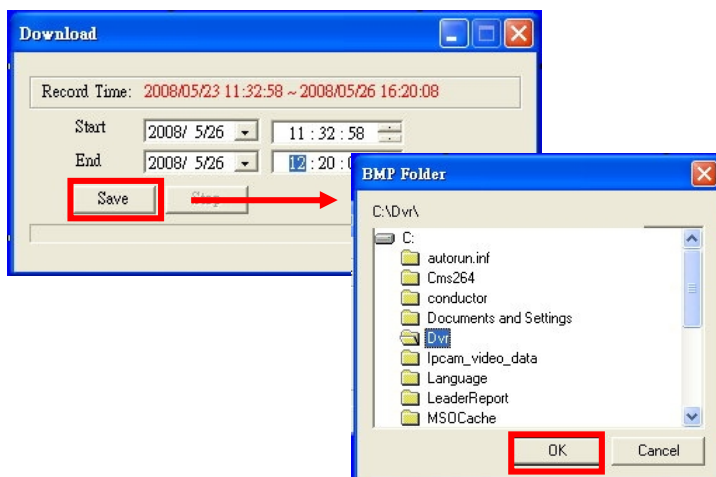
TIME-POINT BACKUP

Click  to operate Time-Point backup.

First, select Start and End backup time which have to among the Record Time.

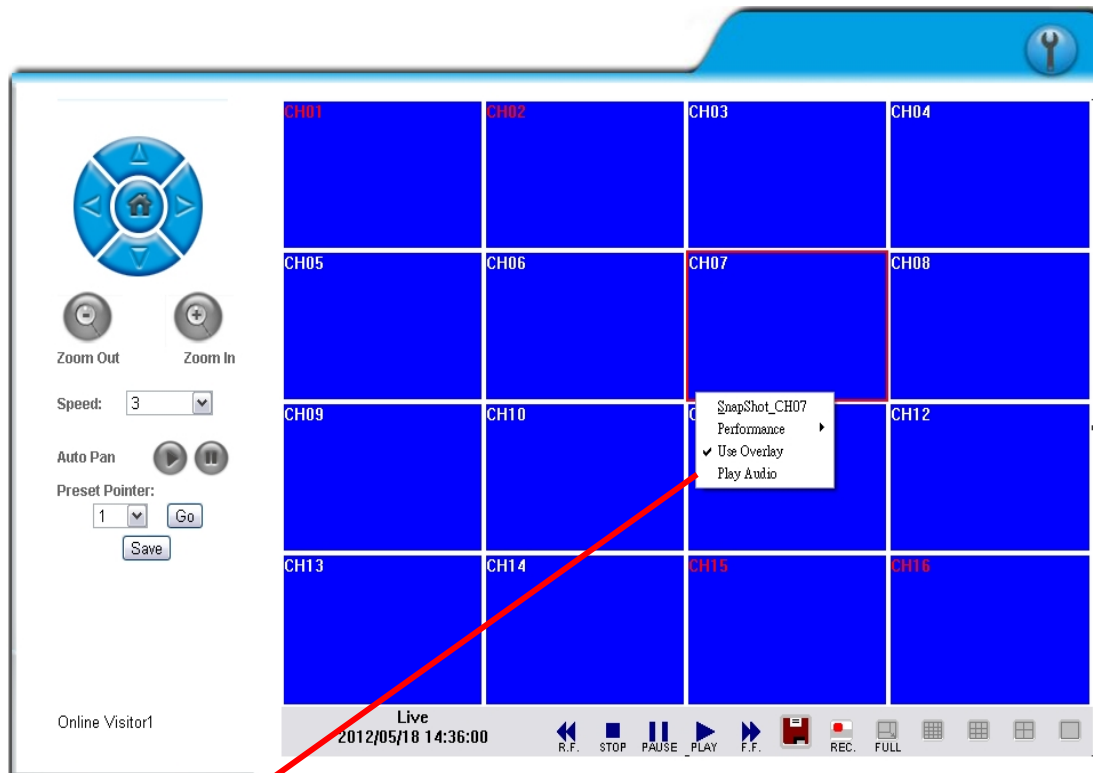


Then, click **Save** button to select the position on PC where the user is going to backup the data. After that, press **OK** button to start the backup.



Finally, double-click the left button of the mouse to open the saved backup file. The backup file will named as the time when start to backup, such as, (20080526113258.ha0) will be 2008/05/26 11:32:58.

OTHER FUNCTIONS



User can use other functions by clicking the left of mouse

A. Snapshot:

User can save any single picture from image.

B. Performance:

User can select image quality (high, medium & low).

C. Use Overlay:

User can use Overlay function. The function can save system resource and promote the efficacy.

D. Play audio:

User can play audio function by channel.

Note: remote user can receive audio from NVR. However, there's no influence on sound recording of playback video whether the audio is played or not.

6.5 CONFIGURE



Click to go to the configuration page.

The screenshot shows a web-based configuration interface. On the left is a sidebar menu with categories: System (containing System Information, User Management, System Update), Network (containing IP Setting, PPPoE, DDNS, Mail & FTP, DHCP Server, HTTP Notification), and Others (containing Player, NVR Setting). The main content area is titled 'System Information' and contains two sections: 'Server Information' with fields for 'Server Name' (NVR) and 'MAC Address' (00:0f:0d:00:13:2c), and 'NTP Setting' with fields for 'Time zone' (GMT+08:00) and 'NTP Server' (198.123.30.132). An 'Apply' button is located at the bottom right of the main content area.

A. SYSTEM / SYSTEM INFORMATION

This is a detailed view of the 'System Information' configuration form. It has a title bar 'System Information' and two main sections. The 'Server Information' section includes 'Server Name' (NVR) and 'MAC Address' (00:0f:0d:00:13:2c). The 'NTP Setting' section includes 'Time zone' (GMT+08:00) and 'NTP Server' (198.123.30.132). An 'Apply' button is at the bottom right.

A-1 SYSTEM INFORMATION

SERVER NAME: This name will show on the IP Installer.

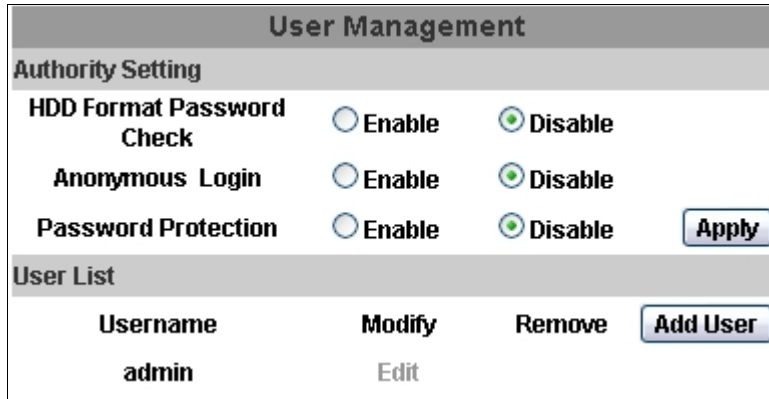
MAC ADDRESS: The MAC address.(cannot be revised)

A-2 NTP Setting

TIME ZONE: It can only be modified via adjust “DATE” and “TIME SETUP
“in the NVR Menu).

NTP SERVER: Revise the time of NVR via different NTP Server.

B. SYSTEM / USER MANAGEMENT



The screenshot shows the 'User Management' interface. It has a title bar 'User Management'. Below it is a section 'Authority Setting' with three rows: 'HDD Format Password Check', 'Anonymous Login', and 'Password Protection'. Each row has two radio buttons: 'Enable' and 'Disable'. In all three rows, the 'Disable' button is selected. To the right of these settings is an 'Apply' button. Below the 'Authority Setting' section is a 'User List' section. It contains a table with columns 'Username', 'Modify', and 'Remove'. There is an 'Add User' button to the right of the table. The table has one row with 'admin' in the 'Username' column and 'Edit' in the 'Modify' column.

User Management		
Authority Setting		
HDD Format Password Check	☐ Enable	☒ Disable
Anonymous Login	☐ Enable	☒ Disable
Password Protection	☐ Enable	☒ Disable
Apply		
User List		
Username	Modify	Remove
admin	Edit	
Add User		

User Management provides 3 levels of limits of authority: Administrator (the highest), User, and Guest.

Administrator: Possessing the highest level of authority to operate full functions within network.

User: Having Live Image and Video Playback authority. Moreover, PTZ controlled is included as well.

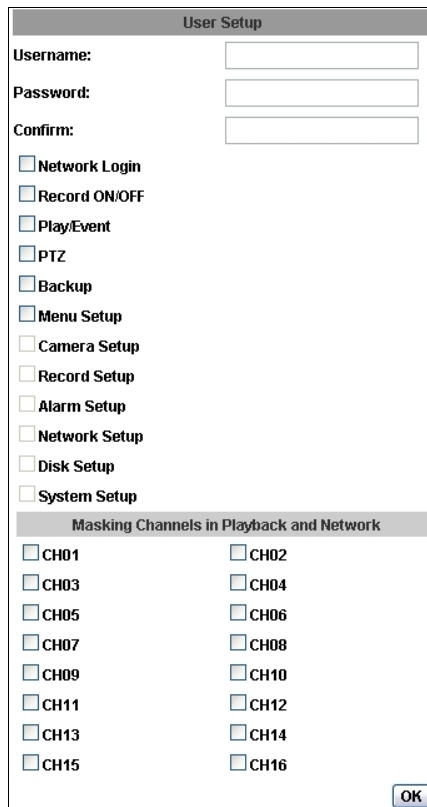
Guest: Only have Live Image authority.

Default administrator account: Username: admin Password: admin

B-1 AUTHORITY SETTING:

Enable or Disable those option to limit the authority.

B-2 USER MANAGEMENT:



The screenshot shows the 'User Setup' interface. It has a title bar 'User Setup'. Below it are three input fields: 'Username:', 'Password:', and 'Confirm:'. Below these are several checkboxes: 'Network Login', 'Record ON/OFF', 'Play/Event', 'PTZ', 'Backup', 'Menu Setup', 'Camera Setup', 'Record Setup', 'Alarm Setup', 'Network Setup', 'Disk Setup', and 'System Setup'. Below these checkboxes is a section 'Masking Channels in Playback and Network' with two columns of checkboxes labeled CH01 through CH16. An 'OK' button is at the bottom right.

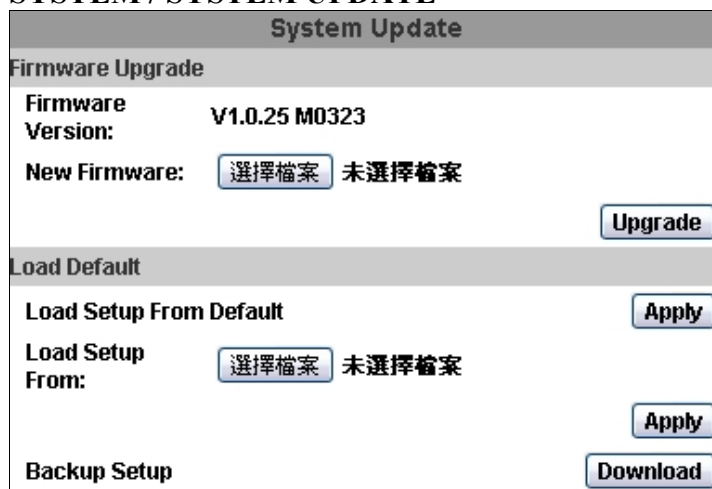
User Setup	
Username:	
Password:	
Confirm:	
☐ Network Login	
☐ Record ON/OFF	
☐ Play/Event	
☐ PTZ	
☐ Backup	
☐ Menu Setup	
☐ Camera Setup	
☐ Record Setup	
☐ Alarm Setup	
☐ Network Setup	
☐ Disk Setup	
☐ System Setup	
Masking Channels in Playback and Network	
☐ CH01	☐ CH02
☐ CH03	☐ CH04
☐ CH05	☐ CH06
☐ CH07	☐ CH08
☐ CH09	☐ CH10
☐ CH11	☐ CH12
☐ CH13	☐ CH14
☐ CH15	☐ CH16
OK	

Add: Key in the Username and Password. The manager can give authority to the new user by tick at the choice below. (Ex. Ticking at “PTZ” allows the new user to control the PTZ). You can apply the authority setting to the channel you choose. The new user has no authority in those channel that are not selected.

Modify: Click **Edit**, then the following window will popup. After inputting Password and Confirm Password, click on **OK**. You can also change the masking channel here.

Remove: Click on selected User name on the user list and click on **Remove**.

C. SYSTEM / SYSTEM UPDATE



Firmware Upgrade:

Click on the “Browse” button to select the latest firmware and then press “Upgrade” button to upgrade the firmware.

Load Default:

Click “Browse” to choose a file. You can load setup from your computer if you ever clicked “Download” and saved the settings before.

ActiveX Updating:

The ActiveX control should be also updated when you update the DVR/NVR firmware. Use the tool in the attached CD to uninstall the old ActiveX control so that the newest version can be registered.

- Automatic Uninstall

Please follow the steps:

1. After updating the DVR/NVR firmware, close the web browser.



2. Run the file "unreg" in the CD to automatically remove the existing ActiveX component "WATCH_16R" from your PC.
3. Log in the DVR/NVR via web browser again, and the browser will require you to install the new version of ActiveX control.

- Manual Uninstall

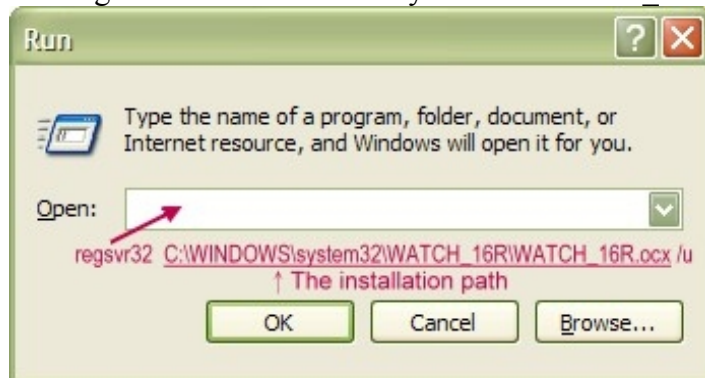
If the tool does not work, please follow the steps to uninstall ActiveX control manually.



1. Look for the files "KConfig.ocx" and "WATCH_16R.ocx" in one of the possible paths:
"C:\WINDOWS\Downloaded Program Files"
"C:\WINDOWS\W16R"
"C:\WINDOWS\system32\WATCH_16R"
2. "Start" -> "Run" -> Key in: regsvr32(The path of KConfig.ocx) /u -> Click "OK"
Ex.: regsvr32 C:\WINDOWS\system32\WATCH_16R\KConfig.ocx /u



3. "Start" -> "Run" -> Key in: regsvr32(The path of WATCH_16R.ocx) /u -> Click "OK"
Ex.: regsvr32 C:\WINDOWS\system32\WATCH_16R\WATCH_16R.ocx /u



4. Log in the DVR/NVR via web browser again, and the browser will require you to install the new version of ActiveX control.

D. NETWORK / IP SETTING

IP Setting

IP Assignment

☐ DHCP

☒ Static

IP Address: 192.168.1.211

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.254

DNS 1: 168.95.1.1

DNS 2: 168.95.192.1

Web Page Port: 80

UPNP Port Forwarding

☐ Enabled

External HTTP Port: 80

External RTSP Port: 554

Apply

D-1 IP ASSIGNMENT

DHCP: In Dynamic Host Configuration Protocol (DHCP) mode, DHCP server will get setting done automatically.

STATIC IP: Please input IP address, Subnet Mask, and Gateway based on network environment.

D-2 UPNP PORT FORWARDING

When a router is used, you can enable this function to allow the user to link the device in the intranet.

E. NETWORK / PPPoE

PPPoE

PPPoE Setting

☐ Enabled ☒ Disabled

Username:

Password:

Send mail after dialed

☐ Enabled

Subject:

Apply

E-1 PPPoE SETTING

Click on Enabled to enable ADSL dial function.

Username: Username for ADSL account.

Password: Password for ADSL account.

After dialed successfully, new IP address will appear.

E-2 SEND MAIL AFTER DIALED

Click on Enabled to enable SEND MAIL AFTER DIALED function. You can also give a subject of mail.

F. NETWORK / DDNS SETTING

DDNS

DDNS Setting

☐ Enabled ☒ Disabled

Provider:

Hostname:

Username:

Password:

Schedule Update: Minutes

State

Apply

Note:

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

Click on Enabled to enable DDNS function.

F-1 DYNDNS.ORG

DDNS SETTING - DYNDNS.ORG

PROVIDER: Select dyndns.org

HOSTNAME: The registered hostname in DYNDNS.ORG.

USERNAME: The registered username in DYNDNS.ORG.

PASSWORD: The registered password in DYNDNS.ORG.

SCHEDULE UPDATE: A period of time to update IP address.

STATE

1. Updating: Information update.

2. Idle: Stop service.

3. DDNS registered successfully, now log by

- http://<username>.ddns.camddns.com: Registered successfully.
4. Updating Failed, the name is already registered.
 5. Updating Failed, please check your internet connection.

F-2 DDNS.CAMNND.S.COM

DDNS

DDNS Setting

☐ Enabled ☒ Disabled

Provider: ddns.camddns.com

Username:

Schedule Update: 5 Minutes

State

Idle

Apply

Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

DDNS SETTING – DDNS.CAMDDNS.COM

PROVIDER: Select ddns.camddns.com

USERNAME: The registered username in DDNS.CAMDDNS.COM.

SCHEDULE UPDATE: A period of time to update IP address.

STATE

1. Updating: Information update.
2. Idle: Stop service.
3. DDNS registered successfully, now log by
http://<username>.ddns.camddns.com: Registered successfully.
4. Updating Failed, the name is already registered.
5. Updating Failed, please check your internet connection.

DDNS Setting Steps:

Press ① “ENABLE” option to enable DDNS function and select ②

“ddns.camddns.com” of the provider drop down list which is suggested to use. In

the following, insert ③ the username which the user wants to apply

(i.e. NVR_GODDNS in here). After that, click ④ “Apply” button to apply a

DDNS domain name.

DDNS

DDNS Setting

1. ☒ Enabled ☐ Disabled

Provider: 2. ddns.camddns.com

Username: 3. DVR_GODDNS

Schedule Update: 60 Minutes

State

Updating...

4. Apply

Finally, the NVR domain name (5) (http://NVR_GODDNS.ddns.camddns.com) will be shown on the state block.

DDNS

DDNS Setting

☒ Enabled ☐ Disabled

Provider: ddns.camddns.com

Username: DVR_GODDNS

Schedule Update: 60 Minutes

State

5. http://DVR_GODDNS.ddns.camddns.com

Apply

- NOTE:**
1. If the user selects another provider which is ddns2.ydsnvr.com, all of the setting steps are the same with ddns.camddns.com setting.
 2. However, if dyndns.org provider is selected, please go to www.dyndns.org website to register the account first. The user has to fill in the username, password and hostname for applying the account. After the user applied the account successfully, the dyndns.org will give the user a complete DDNS domain name.
 3. If setting up IP schedule update too frequently, the IP may be blocked. In general, schedule update every day (1440 minutes) is recommended.

G. NETWORK / Mail & FTP

Click on “Motion” or “Alarm” option to enable Mail Setting and FTP Setting function.

Mail & FTP	
Mail Setting: ☐ Motion ☐ Alarm	
Mail Server:	
SMTP Port:	25
Username:	
Password:	
Sender's Mail:	
Receiver's Mail:	
Bcc Mail:	
Event Subject:	
FTP Setting: ☐ Motion ☐ Alarm	
FTP Server:	
Username:	
Password:	
Port:	21
Path:	
Apply	

Mail Setting: Tick “Alarm” to send video to the mail address when external alarm or DI from IPCam is triggered. Tick “Motion” to send video to the mail address when motion detection is triggered.

Mail Server: The IP address of Mail Server (i.e. mail.huntelec.com.tw).

SMTP Port: The port of SMTP (known as Simple Mail Transfer Protocol). (Default value is 25)

Username: The username while log in to the mail server.

Password: The password while log in to the mail server.

Sender's Mail: The sender's account when send the mail via this mail server.

Receiver's Mail: The receiver's mail address.

Bcc Mail: The receiver's mail address for Bcc Mail.

Event Subject: The subject of this mail. (Default value is ALARM MAIL)

FTP Setting: Tick “Alarm” to upload video to FTP when external alarm or DI from IPCam is triggered. Tick “Motion” to upload video to FTP when motion detection is triggered.

FTP Server: The IP address of FTP Server.

Username: The username while log in to the ftp server.

Password: The password while log in to the ftp server.

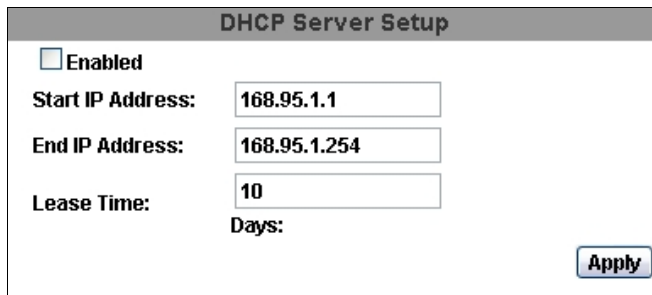
Port: The port number of file transmission. (Default value is 21)

Path: The ftp path where the user wants to reserve the information.

Finally, click on button to reserve the setting.

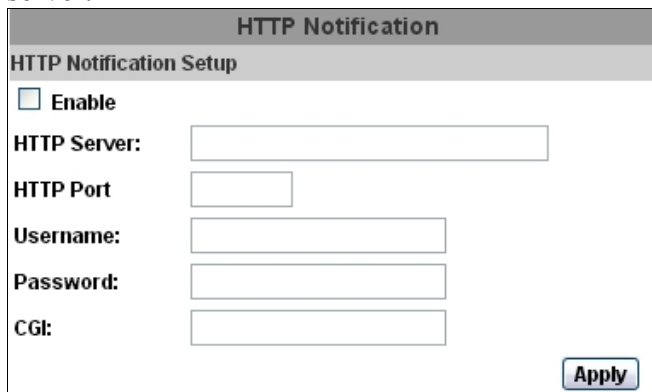
H. NETWORK /DHCP Server Setup

Give the IP address to set up the DHCP Server. The IP will change between the Start IP and the End IP. Lease Time is DHCP renew interval.



I. HTTP Notification

Use the checkbox to enable or disable HTTP Notification. This function allows users to set up the CGI command to a HTTP server. The server can be any device that can receive CGI via HTTP protocol. When alarm events happen, NVR sends CGI to that server.



HTTP Server: Key in the server IP address.

HTTP Port: Key in the server port used for http protocol.

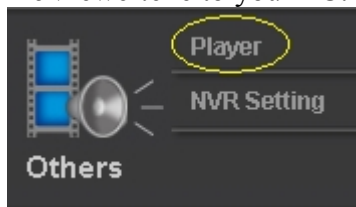
User Name: Key in the server username.

Password: Key in the server password.

HTTP CGI: Key in the CGI that you would like to send to the server when alarm events happen.

J. OTHERS / Player Downloaded

Click “Player” in the left list, and your browser will start up downloading D6Viewer.exe to your PC.



K. OTHERS/ NVR Setting

NVR setting can be changed via the Internet. Actually the settings here is the same as what you can operate on the NVR directly.

NVR Setting

CH01

CAMERA

RECORD

ALARM

DISK

SYSTEM

SAVE

CAMERA

1

◀

▶

IPCAM SETUP

SET

IPCAM VIDEO SETUP

SET

IPCAM IMAGE SETUP

SET

MOTION

SET

MASK SETUP

SET

IPCAM AUDIO SETUP

SET

Warning: Apply NVR setting will cause browser to freeze for seconds while upgrading.

K-1 CAMERA Setting

Please refer to [Chapter3.3-Camera Setup](#).

CAMERA

RECORD

ALARM

DISK

SYSTEM

SAVE

CAMERA

1

◀

▶

IPCAM SETUP

SET

IPCAM VIDEO SETUP

SET

IPCAM IMAGE SETUP

SET

MOTION

SET

MASK SETUP

SET

IPCAM AUDIO SETUP

SET

K -2 RECORD SETTING

Please refer to [Chapter3.4- Record Setup](#)

CAMERA	RECORD	ALARM	DISK	SYSTEM	SAVE
PRE-ALARM RECORDING TIME	10	SEC	◀▶		
POST-ALARM RECORDING TIME	10	SEC	◀▶		
RECORD MODE	SCHEDULE		◀▶		
SCHEDULE SETUP					SET
RECORD	ON	START RECORD		STOP RECORD	

K -3 ALARM SETTING

Please refer to [Chapter3.5-Alarm Setup](#)

CAMERA	RECORD	ALARM	DISK	SYSTEM	SAVE
ALARM TRIGGER SETUP					SET
ALARM OUTPUT SETUP					SET
ALARM EVENT SETUP					SET

K -4 DISK STEERING

Please refer to [Chapter3.8-Disk Setup](#)

CAMERA	RECORD	ALARM	DISK	SYSTEM	SAVE
OVERWRITE MODE	OFF		◀▶		
HARD DISK FULL WARNING	15%		◀▶		
AUTO DELETION	ON		◀▶		
RESERVE DAY	27		◀▶		

K -5 SYSTEM SETTING

Please refer to [Chapter3.9-System Setup](#)

CAMERA	RECORD	ALARM	DISK	SYSTEM	SAVE
NVR NAME	NVR-04			SET	
NVR ID	0			◀ ▶	
DATE FORMAT	YYYY-MM-DD			◀ ▶	
Monitor Resolution	1024x768			◀ ▶	
STATUS DISPLAY SETUP				SET	
DAYLIGHT SAVING TIME				SET	

APPENDIX A: RECORDING TIME LAPSE (HOURS)

2TB					UNIT : Hours				
IMAGE QUALITY (Mbps)		LOW(0.25M)		MEDIUM(0.5M)		STANDARD(1M)		HIGH(1.5M)	
16CH		AVERAGE		AVERAGE		AVERAGE		AVERAGE	
		960		480		240		160	
4TB					UNIT : Hours				
IMAGE QUALITY (Mbps)		LOW(0.25M)		MEDIUM (0.5M)		STANDARD (1M)		HIGH (1.5M)	
16CH		AVERAGE		AVERAGE		AVERAGE		AVERAGE	
		1920		960		480		320	
6TB					UNIT : Hours				
IMAGE QUALITY (Mbps)		LOW(0.25M)		MEDIUM (0.5M)		STANDARD (1M)		HIGH (1.5M)	
16CH		AVERAGE		AVERAGE		AVERAGE		AVERAGE	
		2880		1440		720		480	
8TB					UNIT : Hours				
IMAGE QUALITY (Mbps)		LOW(0.25M)		MEDIUM (0.5M)		STANDARD (1M)		HIGH (1.5M)	
16CH		AVERAGE		AVERAGE		AVERAGE		AVERAGE	
		3840		1920		960		640	

* The value is for reference only

APPENDIX B: HDD COMPATIBLE TABLE

Brand	Model	Capacity	others
SEAGATE	ST380815AS	80 GB	7200 10
	ST3160815AS	160 GB	7200 10
	STM3250820AS	250 GB	7200 10
	ST3250310SV	250GB	SV35.3
	ST3400620AS	400 GB	7200 10
	ST3500320SV	500GB	SV35.3
	ST3500410SV	500GB	SV35.5
	ST3500320AS	500GB	7200 11
	ST3500418AS	500GB	7200 12
	ST3500312CS	500GB	Pipeline HD .2
	ST3750640AS	750 GB	7200 10
	ST3750330AS	750 GB	7200 11
	ST31000333AS	1TB	7200 11
	ST31000340AS	1TB	7200 11
	ST31000340NS	1TB	Barracuda ES.2
	ST31000340SV	1TB	SV35.3
	ST31000322CS	1TB	Pipeline HD .2
	ST31000525SV	1TB	SV35.5
	ST31000524AS	1TB SATA3	7200 12
	ST1500DL003	1.5TB SATA3	Barracuda LP
	ST31500341AS	1.5TB	7200 11
	ST32000542AS	2TB	Barracuda LP
	ST3320620AS	320 GB	7200
	ST3500413AS	500GB	7200
	ST3500320NS	500GB	7200
WD	WD1600AAJS	160 GB	7200 CB
	WD2500AAKS	250 GB	7200 CB
	WD2500AVVS	250 GB	7200 GP
	WD3200AVVS-73L2B0	320GB	7200 GP
	WD5000AACS	500 GB	7200 GP
	WD5000AVVS	500 GB	7200 GP
	WD5000AAKS	500GB	7200 CB
	WD5002ABYS	83 500GB	7200 RE

WD	WD5000AAKX	500GB SATA3	Caviar Blue
	WD5000AUDX	500GB SATA3	Green Power
	WD6400AAKS	640 GB	7200 BLUE
	WD6400AVVS	640 GB	7200 GP
	WD7500AACS	750GB	7200 GP
	WD7500AVVS	750GB	7200 GP
	WD10EACS	1TB	7200 GP
	WD10EADS	1TB	Caviar Green
	WD10EVDS	1TB	Green Power
	WD10EVVS	1TB	7200 GP
	WD10EARS	1TB	Caviar Green
	WD10EALX	1TB SATA3	Caviar Blue
	WD10EURX	1TB SATA3	Green Power
	WD15EADS	1.5TB	7200 GP
	WD15EARS	1.5TB	7200 GP
	WD15EURS	1.5TB	7200 GP
	WD5000AVDS-63U7B0	1.5TB	7200 GP
	WD15EVDS	1.5TB	7200 GP
	WD20EADS	2.0TB	7200 GP
	WD20EVDS-63T3B0	2.0TB	7200 GP
	WD20EARS	2.0TB	Caviar Green
	WD20EURS	2.0TB	7200 GP
	WD30EURS	3TB	CE-GP
	WD30EZRX	3TB	7200
HITACHI	HDS721616PLA380	160 GB	7200
	HDT725025VLA380	250 GB	7200
	HDT725032VLA360	320 GB	7200
	HDP725050GLA360	500 GB	7200
	HCP725050GLA380	500GB	7200
	HDT721010SLA360	1TB	7200
	HDS721010CLA332	1TB	7200
	HDS722020ALA330	2TB	7200
	HDS721050CLA362	500GB	7200

APPENDIX C: ERROR MESSAGE LIST

ERROR MESSAGE	ERROR STATUS & REASON	NOTE
DISK ACCESS ERROR!	H.D.D. Data structure Un-normal. Data does not record into NVR or bad sector on NVR H.D.D. Please install another H.D.D. and perform the record again.	
UPDATE FILE ERROR!	Please re-download the update file and update again.	
FIRMWARE UPGRADE FAILED	Please reboot the NVR and upgrade the firmware. Please send the NVR back to repair when NVR is disability.	
MEDIA ACCESS FAIL!	The USB file format is incorrect (Please format the pen drive to FAT32) or Pen Drive is setup to ONLY READ mode (Please annul ONLY READ mode) when reserve the data by using Pen Drive. The data cannot be burn into CD/DVD disc. Please change another CD/DVD disc and backup the file in CD/DVD disc storage.	
NO FILE!	There is no upgrade file within Pen Drive or the name of upgrade file does not correspond with NVR format. Please adjust the upgrade file name based on the following information. 16CH -> UpdateR.bin 08CH -> Update8.bin 04CH -> Update4.bin	
USB DEVICE NOT FOUND NO USB	Pen Drive undetected. Please Unplug the Pen Drive and plug it again.	
BACKUP START TIME ERROR	Backup start time error.	
BACKUPEND TIME ERROR	Backup end time error.	
DISK ERROR	The data cannot be burn into CD/DVD disc. Please change another CD/DVD disc and backup the file.	
FAN FAILED	Fan Error Warning.	
NO LOG DATA	No Events Record.	
SCHEDULE RECORD	The condition is caused by trying to stop recording when perform the schedule record. Please setup the record to manual mode and then stop the record.	
PLEASE SELECT ONE CAMERA	The message will be shown while using the ZOOM function under split screen condition. Please switch the screen into full screen mode and then operate the ZOOM function.	